A New Model for
Strategic IT-Enabling Change Programmes

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DECLARATION

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis is the result of work which has been carried out since the official commencement date of the approved research program; and, any editorial work, paid or unpaid, carried out by a third party is acknowledged.

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Abstract

Organisations use Information Technology (IT) as an enabler to disrupt and make change within an organisation. The successful delivery of Strategic IT-Enabling Change Programmes requires a more strategic and integrated approach to combat the persistent and global IT project/programme failure rate that is consuming millions of dollars unnecessarily. As such, their successful delivery requires an approach that integrates aspects from the fields of IT, Change and Programme Management.

IT-Enabling Change Programmes are people centric, complex, multidimensional and multifaceted. These projects/programs may bring about cultural change in an organization or transformation of business practices. Driving this change can bring about uncertainty and ambiguity, and leadership is key to successful delivery. The organisational environment for delivery of IT-Enabling Change is complex, dynamic and evolving. As such the project/program requires constant alignment between the business, the industry, the technology, and operations and cater for emergence. As a result, IT-Enabling Change often brings with it adaptive challenges, challenges that the organization may not have anticipated. These change programmes require agility and the ability to be adaptive to the dynamic changing environments they are delivering for and into. Further, delivery of IT-Enabling change into the organization needs to be carefully transitioned into the organization for its successful adoption. IT-Enabling Change Programmes therefore needs the different types of leadership from complexity leadership; 'adaptive leadership' to lead the projects and respond to the challenges presented and 'enabling leadership' to support, champion, protect and transition the project/program.

To build their success, this leadership requires an increased focus on people related factors in addition to the task related factors of time, cost and quality and an approach to build these factors. This Action Research presents a conceptual and holistic model that combines the critical people related factors of Change Programme Leadership, Executive Sponsorship, Stakeholder Partnership and Team Resiliency with the task related factors of Time, Cost and Quality for Strategic IT-Enabling Change Programmes. The Action Research evaluates and confirms these people related factors as critical to the success of IT-Enabling Change Programmes in Australian State Government Departments. The critical success factors and the supporting models to build these factors, have been informed by research and professional experience. The criticality of these factors and the ability to build them requires change programme leadership and a greater focus by organisations to arrest their own IT project/programme failure rate.

Given the multi-disciplinary nature of a Strategic IT-Enabling Change Programmes the research has drawn on perspectives from multiple theories but has been grounded in complexity theory. This

research contributes to the growing body of knowledge in IT-Enabling Change and has implications to practitioners and the methodologies in this field.

Keywords:

Change Programme Leadership, Complexity Leadership Theory, Critical Success Factors, IT-Enabling Change, Programmes, Change Programs, Executive Sponsorship, Team Resiliency, Stakeholder Partnership, IT Failure, Governance

1. Introduction

Many organisational initiatives are now strategic by nature, and coupled with implementation of Information Technology (IT), bring about significant change, (Altameem, Aldrees and Alsaeed 2014). Strategic initiatives may bring about change in various forms, such as transformational, transactional, industry, or organisational change and in the majority of cases is enabled by Information Technology (IT). The associated change is irreversible and may impact stakeholders, culture, business information, technology, business policies, practices and processes, business functions and organisational structure. Change in organisations occurs through various names and may be through projects or programmes, (PMI, 2015). This study focuses on the successful delivery of Strategic IT-Enabling Change Programmes.

It has been well established that Information Technology (IT) has been used by organisations for many years to drive or enable strategic change or stimulate complex organisational change, (Benjamin and Levinson, 1993). IT and Information Systems, (IS) have been used synonymously in this research. These initiatives have been referred to as Strategic IT-Enabling Change Programmes in this study. However in the literature and in practice, IT and change and programme management are often viewed separately and there are minimal methods and models that integrate IT and change. Benjamin and Levison (1993, p.24) recognised this stating that "IT-Enabling Change is different" as it integrates Information Technology and introduces change to business. Further recent research by Crawford, Aitken and Hassner-Nahmias (2014), recognises the intersection of project and change management, but also that organisational change has been used synonymously with programmes. The OGC (2011) advocates that programmes are about leading change. As such, this study posits an integrated approach to bring together IT, Change and Programme Management.

Even though IT-Enabling Change programmes are not a new phenomenon, the IT failure rate of these persists. The definition of failure can vary, however most commonly, failure is deemed to be budget overrun, schedule slippage, or the non-delivery of the quality requirements (McManus & Wood-Harper, 2007, p. 38). Recent research by the Project Management Institute (PMI) (2015) confirms that the continuing, global, low success rate of programme and project management, remains at 64%. Previous statistics of the IT failure rate ranges between 30-70% according to Charette (2005). Smith (2003) found that only 19% of cultural change efforts were rated among the top quartile of successful organisational change efforts. Young and Poon (2013, p.944) exclaimed that despite extensive research and "despite more than 50 years of intensive effort, the failure rate of IT remains unsolved". More recent research by PMI (2014) has shown that only 56% of strategic initiatives deliver their intent, with such poor performance resulting in organisations losing $109

million for every $1 billion invested in projects and programmes. Gartner (2014 cited in Basu, 2015) stated that IT expenditure had exceeded $2.5 trillion globally. As such, the financial impact of IT project failures is so significant that organisational Executive and Board members need to be aware of these impacts. In addition the global problem needs to be arrested.

The significance of the IT project/programme failure rate has resulted in it being prevalent in literature yet it remains a persistent challenge for organisations. Many causes and critical success factors of programme management have been identified through these studies. The top four factors of failure as summarised by the OGC (2005) were of strategic alignment, lack of clear senior management ownership and leadership, lack of effective stakeholder engagement and lack of competency. In more recent research the PMI (2013) continued to argue that Executive Sponsorship as a fundamental reason for project failure.

Yet in many cases in spite of the extant literature, we continue our reductionist focus on the task related factors of time, cost and quality, to measure project or programme success, (Duggal, 2010; Cooke-Davies, 2002). It is therefore unsurprising that a growing body of research is questioning whether this focus in valid. Are we focusing on the right factors in practice, as the key factors of failure identified by the OGC (2005) and the extant literature, are people related factors? As the task related factors are also used for measurement, do we place greater focus on these in our delivery rather than on the people related critical factors?

In a recent study by Cserhati and Szabo (2014) on success factors and success criteria in organisational change projects, it was determined that the relationship-orientated factors of project leadership, the culture of the project team, communication and co-operation with contractors and sponsors, and partnerships with stakeholders were essential for the achievement of objectives. Further research by Basu (2015) and Akcam et al., (2012) also identified people factors as critical success factors for technology-enabled business transformation. The key critical people related success factors identified by Basu (2015) and Akcam et al., (2012) included Top Management support, commitment and effective leadership, stakeholder involvement and engagement, and an empowered and effective team. In addition, research by the PMI (2010) in their review of U.S. Federal Government programmes, determined that superior stakeholder engagement, active executive support, communication and agility were the four themes for programme success. Communication and agility were found to be part of Team Resiliency and adaptive leadership, (Mallak, 1998); Selligman, 2011).

Studying IT-Enabling change programmes however in the confined boundaries of their own delivery without looking at the whole complex structure of the organisational environment provides a limited

and ambiguous snapshot view. The complexity of the integration of IT, change and programmes within changing political and organisational environments, with multiple changing stakeholders and interacting elements in the system, conceptualises Strategic IT-Enabling Change Programmes as complex adaptive systems, based in complexity theory. Complexity theory is increasingly being seen, by both academia and practitioners, as a way to understand organisational change, (Burnes, 2005). As this research is based on a cultural IT-Enabling Change Programme and two further IT-Enabling Change Programmes, this research supports McCarthy's (2003) view that IT application development projects are complex adaptive systems.

Further, the Programme Leadership to deal with the complexities, ambiguities, rich interconnectivity, adaptability and learning within these strategic or transformational change and IT enabling programmes, needs to draw on complexity leadership, (Uhl-Bien, 2014). The three aspects of complexity leadership according to Uhl-Bien (2014) include, adaptive leadership, enabling leadership and administrative leadership, and are applied in this study to the programme team, sponsorship group and the stakeholders of the organisation.

The objective of this research was to evaluate and assess the effectiveness of a new model for the delivery of Strategic IT-Enabling Change Programmes, which extends the focus of time, cost and quality to include the people related factors for strategic IT change programmes comprising:

- Executive Sponsorship.
- Team Resiliency.
- Stakeholder interdependency management, subsequently referred to as Stakeholder Partnership.

This Action Research presents a conceptual and holistic model that combines the critical people related factors of Executive Sponsorship, Stakeholder Partnership and Team Resiliency with the task related factors of Time, Cost and Quality for Strategic IT-Enabling Change Programmes. The Action Research evaluates and confirms these people related factors as critical to the success of IT-Enabling Change Programmes in Australian State Government Departments. The research also confirmed the criticality of Change Programme Leadership and its need to also be considered a critical success factor. The Action Research took place in a State Government in three Departments in Australia. In the main Department for the Action Research, the programme was an IT-Enabling Cultural Change. The Department was a central agency, who had become entrenched in their use of paper over the past 20 years. The culture of the organisation was reliant on paper to respond to Ministerial correspondence and provide Ministerial advice on state matters. The organisation was moving to a central location and moving to an 'agile' workplace environment. The cultural change was to move

the organisation to utilise electronic material more extensively and become less reliant on paper. In the two Departments, the Action Research evaluated 'thin slices' of the model in technology related change programmes.

The critical success factors and the supporting models to build these factors, were originally informed by professional experience and have been evaluated and refined by the literature through this Action Research. The literature review shows that these success factors have been considered for over two decades, (Gumuenden and Lechler, 1997) but have not been focused on in practice. This research fills this gap and provides the supporting models which provide a process by which the programme manager can build the critical success factors to engender the creation and focus on these factors in practice. During each of the Action Cycles within this research, the model and its supporting models were continually reviewed and where appropriate were refined. The criticality of these factors was confirmed as well as the confirmation that change programme leadership and a greater focus by organisations was required to arrest their own IT project/programme failure rate.

As Action Research aims to address organisational problems as well as contribute to research, it was used as the methodology for this research. McKay and Marshall (2011) refer to the 'dual imperatives' of Action Research, the first imperative to solve the problem and the second being the research imperative. Action Research has become a popular method for studying Information Systems and several Information Systems Journals have been devoted to Action Research, (Davison, Martinsons and Ou, 2012). The Action Research explored:

- The connections and relationships between Executive Sponsorship, Team Resiliency and Stakeholder Partnership.
- The criticality of the effectiveness of Executive Sponsorship in a strategic IT change programme.
- The transparency required to build stakeholder partnership.
- The building of team resiliency to be adaptive and create innovative solutions that then influence organisational culture.
- The leadership required to create these factors and deliver successfully.
- The impact of this model in combatting the IT failure rate.

This thesis is organised into the following sections. Chapter Two includes a literature review while Chapter Three includes the research design and methodology. Chapter Four provides an overview of the Strategic IT-Enabling Change Programme model with the proposed critical success factors, as well as the supporting models to build these critical success factors that will be evaluated and confirmed in the study. Chapter Five describes in detail the study of a cultural IT-Enabling Change

Programme, followed by analysis and discussion. I have then presented the final strategic IT-Enabling change model with the critical success factors confirmed through this study in Chapter 6.

This practice enhancement should aid practitioners in the implementation of strategic IT-Enabling Change Programmes and provide a greater focus on the people related factors of change. With a more strategic and integrated focus we should begin to counter the IT project and programme failure rate.

2. Literature Review

2.1 Introduction

The problem being addressed by this research, is the IT project/programme failure rate. This is countered in this research through the extensions to existing models to include people related critical success factors and the supporting models to build these factors. These people related factors are needed to drive the successful implementation of Strategic IT-Enabling Change Programmes.

The literature review undertaken comprised a systematic approach through the bodies of knowledge that focused on the areas related to this problem. Several online databases were reviewed, including EBSCO Research databases, Web of Science, Pro-Quest and The University of Liverpool's own database as well as the World Wide Web. The list of terms was search in singular and plural and a minimum of several pages were searched to identify those that were the most specific to this research, both through the headings and the abstracts. To form a comprehensive study and to synthesize findings from relevant articles, at least 10-20 pieces of literature were reviewed in each field. To overcome any search algorithm biases which may have been based on attribute keywords and the number of hits from trusted sites, when a relevant article was sourced, further pages were then searched. This provided an unbiased view to ensure an adequate review of less frequented but valuable literature references. The fields of research, the theories and methodologies and the related areas reviewed in the literature have been summarised in Table 2.1.

Examples of Search Phrases in the Literature	**Research Areas**	**Specific Theories and Methodologies**
IT-Enabling Change/IT-Enabled Change Change Management Programme Management Methodology Project Management Methodology Change Management	IT-Enabling Change Programmes (Reference Section 2.2)	Complexity Theory Complex Adaptive Systems
IT-Project/Program Failure Rate IT/Project/Programme causes of failure	IT Project Program Failure (Reference Section 2.3)	
IT Project/Programme Critical Success Factors IT Project/Programme Critical Success Criteria Programme Management Project Management	IT Project Programme Critical Success Factors (Reference Section 2.4)	Programme Management Methodology Project Management Methodology ISO 9000
Complex Leadership Theory Adaptive Leadership Enabling Leadership Administrative Leadership Transformational Leadership Transactional Leadership	IT-Enabling Change Programme Leadership (Reference Section 2.5)	Complex Leadership Theory

Examples of Search Phrases in the Literature	Research Areas	Specific Theories and Methodologies
Technical Leadership Change Leadership IT-Enabling Change IT Leadership		
Enabling Leadership Programme Management Programme Leadership Project Leadership Sponsorship Governance Project Management Management v Leadership Portfolio Management	Executive Sponsorship & Governance (Reference Section 2.6)	Change Theory Change Management Methodology Programme Management Methodology Project Management Methodology Portfolio Management Methodology
System Development Life Cycle Agile Systems Management Change Management Stakeholder Management Innovation	Stakeholder Partnership (Reference Section 2.7)	Systems Theory Soft Systems Methodology Stakeholder Theory Hofstede Cultural Dimensions
Adaptive Leadership Organisational Resiliency Community Resiliency Resiliency Thinking Action Learning Double Loop Learning Team Resiliency	Team Resiliency (Reference Section 2.8)	Leadership Theory
Complex Adaptive Systems (CAS) IT Project/Programmes as CAS	IT-Enabling Programmes as Complex Adaptive Systems (Reference Section 2.9)	Complexity Theory Complex Adaptive Systems

Table 2.1 Literature Review Fields

The theories and methodologies were further used in the research design, Chapter Three.

During each action cycle in the study in Chapter Five, a thematic analysis was continually observing and recording patterns within the data. Further research was then conducted on the various aspects identified and included in Chapter Five with the Action Research.

2.2 IT-Enabling Change Programmes

There were several areas in the literature that supported this area; Change Management, IT-Enabling Change, Strategic Change, Change programmes and Programme management. The literature illustrates that IT-Enabling Change includes IT and Change, and that Change Programmes include change and programmes. Programmes include change (OGC, 2011). Therefore it is logical that these areas be integrated to become IT-Enabling Change Programmes.

Change is complex and critical in an organisation and despite the increasing amount of literature, only 18% of organisations have effective change management, (PMI, 2014). There are multiple change models and theories of change, (D'Ortenzio, 2012) such as:

- Kurt Lewin's (1951) approach to organisational change that focused on the interdependencies and relationships with a three step model of unfreezing, changing and refreezing
- Mintzberg and Quinn's (1991) model of change which considers the age and size of the organisation, the power bases in the organisation, as well as the environment
- Dunphy and Stace's (1993) contingency model of change that focused on transformational change, both charismatic or dictatorial, and incremental change, both participative and forced evolution
- Kotter's (1996) emergent approach to organisational change, an eight step continuous open process of adaption with continual improvement and organisational learning
- Anderson and Anderson's (2001) model of change that consists of three areas, content – organisational and technical, people – behaviour and culture and process.

A detailed review of these change models, and in particular how elements of these relate to the research undertaken here, can be found in Table 4.2, page 72.

Change Management, as its own discipline, has been gaining wider recognition and the Change Management Institute was formed in Australia in 2007, (Crawford, Aiten, Hassner-Nahmias, 2014). In this recent research, Crawford, Aitken and Hassner-Nahmias (2014) reviewed the intersection of project and change management even though they acknowledged that change programmes were usually undertaken.

IT-Enabling Change has been recognised in the literature for the past two decades, because change and IT are closely connected, (Benjamin and Levinson, 1993). As Benjamin and Levison (1993) determined, IT-Enabling Change is different as there is a multidimensional focus on strategy, information technology, information, business processes and work methods, functions and

organisation structure, stakeholders, and culture. Benjamin and Levinson (1993) developed a framework for the management of IT-Enabling Change. This research extends this framework.

Change may take the form of Cultural Change, Transformational change, Industry Change, Organisational Change, or Business Process Re-engineering and may develop new services and products. The change may or may not be strategic. Strategic Change is the implementation of strategic initiatives that may alter the culture, practices, priorities or goals of the organisation, (Gioia and Chittipeddi, 2002). Change aims to introduce new behaviours in the organisation, enable employees to internalise the value of the change and change their ways of working, (D'Ortenzio, 2012). The PMI 2008, as cited by Crawford, Aitken, Hassner-Nahmias (2014), view that the management of organisational change is the domain of programme management not project management.

Many of these change initiatives have an IT-enabling component or use the IT-enabling component to drive the change. For IT-Enabling Change to be effective and IT solutions to be successful, they need to adapt technology, business process and organisation together, which is different to general change, (Benjamin and Levinson, 1993).

From industry experience, IT-Enabling Change is being used by organisations to rethink their digital channels of social media for marketing, the sharing of personal health information across the health ecosystem, or the dissemination or aggregation of information across multiple businesses or government departments. These changes are significant, uncertain, complex, political, and high risk, and may bring about change to the culture of an organisation, to processes within an organisation, to people and their roles in an organisation, or across a supply chain or to an industry and its ecosystem. Geyer (2002) concluded that IT is not a 'silver bullet' and that IT-Enabling Change must be strategically driven, and be enterprise wide to realise the full benefits. IT-Enabling Change requires an integrated strategy and process.

In their critical review of programmes, Lycett, Rassau and Danson (2004) believed that there was increased recognition that programme management bridged the gap between inward focused task oriented view of project delivery and the emergent view of organisational strategy. As such the development of programme management has reflected the business need to accomplish strategic change with flexibility yet with structure.

Project, programme and portfolio management is now the dominant model being used by organisations for the implementation of strategy, transformation, new product development and

continuous improvement, (Winter et al., 2006). Winter et al., (2006) acknowledged that new models and theories were needed for the complexity of projects and programmes.

Programme management has been increasingly recognised as a powerful framework to deliver rapid enterprise wide change that may be uncertain and ambiguous, Pellegrinelli (2002). Programme management provides the structure and cyclical processes of development to support change and delivery of business outcomes. Programme management has emerged over the past 15 years, Office of Government Commerce (OGC, 2011; PMI, 2013). Research conducted by Maylor et al., (2006) found that many organisations were moving toward programme management for managing change, managerial sense-making and control of large complex projects and devised the term 'programmification'. For example, Maylor et al., (2006) found that the government office was moving to establish capability and standards in programme management, a government agency was seeking solutions in programme management, and commercial organisations were moving to programme management to gain greater business benefits and value creation.

Programmes function from within an organisation and are context sensitive. They are temporary, have their own organisation structures and coordinate several projects to produce a business outcome. The outcome from IT programmes is greater than the combined outputs from each of the projects and has been described as the "sum of the whole is greater than the sum of the parts" (Stacey, 2011, p. 55; Simon, 2005, p.140). As such there are many moving parts and are complex, unpredictable and multidimensional.

Programmes are dynamic and emergent in nature, and are shaped through the interaction with its stakeholders, the business environment and the power structures, (Pelligrinelli, 2011). Programmes have a longer life than a project, and as such they require periodic alignment with changing organisational strategies and environmental changes. Being cyclical, programmes can build on the lessons of previous phases in designing the next phases, which encourages learning and development and adaptivity. This makes them ideally suited for Action Research.

As such, programme management for IT-Enabling Change, brings together change management, Information Technology (IT) management and programme management. It is therefore logical that IT-Enabling Change draws on the practice of programme management and becomes IT-Enabling Change Programmes. To aid the integration of these aspects, new models have been evaluated in this research with an aim to combat the IT failure rate.

2.3 IT Project/Programme Failure Rates and Causes of Failure

Despite the significant amount of literature available, the failure rate of IT projects and programmes continues around the globe. The success rate of IT projects remains persistently low around 16%, and historically run over budget on IT failure to 200% and over the contract duration by 54%, (Bronte-Stewart, 2009). Despite extensive research and "despite more than 50 years of intensive effort the failure rate of IT remains unsolved" (Young and Poon, 2013, p.944).

In research by Young (2005), he pointed out statistics from researchers and industry:

- 62% are claimed to be successful (Falconer and Hodgett 1999)
- 30-70% IT projects fail (Charette 2005, Miller 2002)
- 15-28% of IT projects are abandoned before completion (Standish 1999, 2003)
- 60% of IT projects are abandoned prior and up to the end of the design phase (McManus and Wood-Harper 2007)
- 30-40% of IT projects are escalated (Keill and Mann 2000) with cost overruns by 200% and schedule by 50% (Stanley and Uden 2013)
- 30-40% of projects are implemented without gaining benefits (Wilcocks and Margetts 1994)
- 80-90% IT investments fail to meet performance objectives (Clegg 1997)

Additional research by KPMG (2005), determined that in 600 organisations across 22 countries, 50% of IT projects failed and 86% did not meet expectations.

The IT failure rate is significant and continues to absorb major investment by organisations. Charette (2005) created the 'IT Hall of Shame' that outlines multiple IT failures and their investments including; 2005 Hudson Bay Co (Canada) inventory system problems contributing to $33.3million loss, 2004-5 UK Inland Revenue software errors contributing to $3.45 billion tax-credit overpayment, 2004 Ford Motor Co purchasing system abandoned costing $400 million, 2004 Sainsbury PLC UK supply chain management system abandoned after deployment costing $527 million, and the list continues.

Research by Grenny, Maxfield and Shimberg (2007, p.47) from 11 organisations, and over 15 years of field work, found that over 25% of the $255 billion spent per year on IT projects was lost due to failure and cost overruns and that "there was an 82% chance that a project would come in far over budget, terribly past schedule and woefully short on quality".

In Australia, Young (2005) estimated that the amount spent on IT projects in 2002/2003 was $15.1B. Applying these percentages suggests that $4.6B is wasted annually in Australia on projects that do

not deliver benefit or are abandoned. Stanley and Uden (2013, p. 38) determined that the cost of project failure across Europe in 2004 was US$142B.

As an example: by 2013 the clinical ICT systems implementation for eHealth in Victoria, Australia, the costs had risen from $58.3 million budget in 2003, to $145.3 million for only four of the 19 health services, (Victorian Auditor-General's Report, 2013).

These failures can have significant impacts to organisations themselves and the heads of these organisations. Lederer and Mendelow (1993) outlined the consequences of failure, including not only financial implications, but also loss of competitive advantage. Prior research by Argenti (1976, p.12), found that a "defective response to change was one of the prime causes of failure in mature companies" and that the two typical mistakes were overtrading and an ambitious project.

More recent research by PMI (2014) has shown that only 56% of strategic initiatives deliver their intent with such poor performance resulting in organisations losing $109 million for every $1 billion invested in projects and programmes. As such, the financial impact of IT project failures is so significant that the global problem needs to be arrested.

McManus and Wood-Harper (2007) identified that management factors accounted for 65% of the failure rates and that the other 35% was due to technical causal factors.

Higgs and Rowland, (2005) found that only 30% of change initiatives were successful. Smith (2003) found that only 19% of cultural change efforts were rated among the top quartile of successful organisational change efforts. Smith's (2003) research findings showed that the key negative factors correlated with failure were the sponsor leaving, key executives not supporting the change effort, the sponsor being uninvolved or ambivalent about the change effort, suppliers failing to deliver, the change clashing with the culture or the plan not being transparent or communicated.

2.3.1 Causes of Failure

The UK Office of Government Commerce (OGC) (2005) summarised the top four factors of project failure being:

- Lack of alignment between the project and organisation's strategic priorities
- Lack of clear senior management, ownership and leadership
- Lack of effective engagement with stakeholders
- Lack of competency

The first and second factors relate to lack of Executive sponsorship which was cited in more recent research as a fundamental reason for project failure by the Project Management Institute (PMI,

2013). The third factor relates to stakeholder engagement and the fourth, competencies of the team. These factors relate to the people related factors that are evaluated and confirmed in this study. As can be seen in Table 2.2, although there is differing nomenclature for the causes of failure, there is alignment with the proposed factors.

People Related Factors and Task Related Factors	**Authors**	**Causes of IT Failure**
Executive Sponsorship and Governance	PMI (2014), Standish Group (2013), UK Office of Government Commerce (OGC) (2005), Pinto and Mantel (1990), Smith (2003), King (2012), Standish Group (2013)	C-suite executives missing in action, Lack of Executive support, Inadequate prioritisation of projects and programs, Lack of alignment between the project and organisation's strategic priorities, Business Strategy misalignment, Mission, Sponsor leaving, Sponsor not involved, Lack of Top management support, Organisational priorities and interdependencies, Political complexity, Unsound Business Case, Lack of Ownership and Accountability
Change Programme Leadership	Smith (2003), PMI (2014), UK Office of Government Commerce (OGC) (2005), Basu (2015), McManus and Wood-Harper (2007), King (2012), Standish Group (2013)	Change clashing with culture, Ineffective change management, Lack of clear senior management, ownership and leadership, Lack of Leadership commitment, Poor delivery leadership, Poor planning, execution and support, , Lack of competency for strategy implementation, Complexity and Size
Stakeholder Partnership	McManus and Wood-Harper (2007), PMI (2014), PMI (2014), UK Office of Government Commerce (OGC) (2005), McManus and Wood Harper (2007), Pinto and Mantel (1990), Smith (2003), Standish Group (2013), Keil, Cule, Lyytinen and Schmidt (1998), Lehtinen, Mantyla, Vanhanen, Itkonen and Lassenius (2014), Stanley and Uden (2013), Standish Group (2013)	Insufficient domain knowledge, Lack of effective engagement with stakeholders, Poor design, Misunderstanding of requirements, Poor or immature processes and alignment, Poor stakeholder management and communication, Poorly defined requirements and frequent change requests, Minimal stakeholder consultation, Suppliers failing to deliver, Poor user involvement, Lack of user commitment, Poor management of expectations, Changing scope, Unqualified Assumptions, Lack of stakeholder management, Lack of release and deployment, No Client Acceptance
Team Resiliency	McManus and Wood-Harper (2007), UK Office of Government Commerce (OGC) (2005), Pinto and Mantel (1990), King (2012), Keil, Cule, Lyytinen and Schmidt (1998), Standish Group (2013)	Poor competencies, in particular estimation and risk management and total reliance on a methodology, Inadequate depth of understanding of IT, Lack of competency, Team competency, Ambiguous roles and responsibilities, Expertise and experience, Inadequate resourcing, Political conflict, Technical tasks
Quality	McManus and Wood-Harper (2007), Lehtinen, Mantyla, Vanhanen, Itkonen and Lassenius (2014), Standish Group (2013)	Poor Code, Inadequate documentation, Insufficient testing, Versioning, Poor support, Tools and Infrastructure, Scope

People Related Factors and Task Related Factors	**Authors**	**Causes of IT Failure**
Time	Pinto and Mantel (1990), King (2012), PMI (2014)	Schedule/Plans, Optimism bias, Milestones and Metrics, Poor Estimation
Cost	King (2012)	Complex budgeting, Poor procurement and contract management
Business Outcome	Ofori (2013), King (2012), OGC (2005), Yeo (2002), Ombudsman (2011)	Not Clear Mission and Goals, Ambiguous Outcomes., Blurred Outcomes, Not a shared understanding of outcomes, Unclear vision, Poor planning and business case

Table 2.2 Causes of IT failure and Success Factors

It is alarming to see firstly the amount of research that has been conducted in this area and secondly that the people related factors have been identified as causes of failure for the past two decades.

Yet these factors continue to beleaguer IT projects. Researchers, such as Koskela, and Howell and Williams (as cited in Fernandez and Fernandez, 2011), have presented arguments since 2002 that a new paradigm was needed for uncertain, time limited, political, complex IT projects.

This requires further evidence which this research provides.

Further, as IT becomes more and more complex and dynamic, this raises the criticality of, and the need to increase the focus on the people related factors for the successful delivery of IT-Enabling Change Programmes. The models evaluated in this research raise this focus and were used in the evaluation of delivery.

2.4 IT-Enabling Change Programme People Related Success Factors

Programmes are about leading change and change involves people, (OGC, 2011). IT-Enabling Change therefore needs to be people centric, not technology centric. Many critical success factors have been suggested by the literature for IT-Enabling Change and cultural change. However, given the persistent IT failure rate, are we focusing on the right things throughout delivery and are we consistent in our nomenclature of these factors?

Critical success factors for effective programme management were defined by Shehu and Akintoye (2009, p.2) as "inputs that lead directly or indirectly to the success of a project".

Cserhati and Szabo (2014) alleged that success factors required permanent attention otherwise could contribute to the failure of a project. Cserhati and Szabo (2014) found in their research that the top four success factors that had a relationship orientation were project leadership, organisational culture of the project team, communication and co-operation with contractors and sponsors and partnerships with local and national providers. The authors found that top management involvement, leadership style, communication and cohesiveness of the team were related to success in complex projects. The authors found the top factors with a task orientation to be project definition and contract strategy. This was quite different to the known task factors of time, cost and quality.

Cserhati and Szabo's (2014) findings are supported in recent research that focused on technology-enabled business transformation by Basu (2015), who reviewed 5 case studies by McKinsey (2013), Padmanabhan (2012), McKinsey (2011), Motwani, Subramanian, Gopalakrishna (2005) and Ruddle (1999) across 5 industry sectors. Once again, the author (2015, p. 39) determined that leadership was the top critical success factor as technology-enabled business transformation was adaptive, dynamic and plain hard work.

Similar findings were identified in the research by Stelzer and Mellis (1998) who based their identification of success factors for software process improvement projects on ISO 9000 and Capability Maturity Models (CMM) literature from authors such as Goldenson and Herbsleb (1995), Kotter (1995), McGuire (1996), Krasner and Ziehe (1995).

The analysis of the literature found that many success factors could be categorised into the proposed IT-Enabling Change Programme people related factor that are evaluated in this study. These and the analysis are shown in Table 2.3.

People Related Factors and Task Related Factors	**Authors**	**Summary of Literature Reviews on Critical Success Factors in IT-Enabling Change**
Executive Sponsorship and Governance	Basu (2015), Pinto and Slevin (1987), PMI (2010), Young and Jordan (2008), Heitschold, Reinhardt and Gurtner (2014), Ofori (2013), Rofner (2009), Waeffler and Pfister (2008), Gumuenden and Lechler (1997), Smith (2003), PMI (2015), PMI (2014), Young and Poon (2013), Jurish, Cuno, Palka, Wolf, Kremar (2012), Akeam, Guclu, Guler, Hekim and Ogunc (2012), McManus, Wood-Harper (2003), Benjamin and Levinson (1993), Stelzer and Mellis (1998), Pinto and Mantel (1990)	Mission, Top Management Support, Definition and Objectives, Vision clarity, Business Case, Active Executive support, Strategy, Executive commitment, Development Priorities, Ownership, Sponsorship, Actively Engaged Sponsors, Senior/Top Management Commitment, Top Management Support and Leadership, Management Support, Champions, Energy level from top management for change, Effective Leadership and Accountability Lack of excessive government red tape, Lack of legal encumbrances, Minimal number of public/government agencies involved Commitment to schedules, budgets, goals, Relevant and realistic objectives, Sense of urgency, Setting and communicating objectives of the change efforts
Change Programme Leadership	Cserhati and Szabo (2014), Cserhati and Szabo (2014), Basu (2015), Gumuenden and Lechler (1997), Heitschold, Reinhardt and Gurtner (2014), Rofner (2009), Waeffler and Pfister (2008), Akeam, Guclu, Guler, Hekim and Ogunc (2012), Wu, Zhong, Mei (2011),	Competence and commitment of leader, Effective Leadership, Change Leadership, Project Leadership, Sponsor Communication, Integrated Planning, Leadership and accountability, Sense of community, Encouragement of Participation, Direction and Structure, Leadership, Strategic quality planning, Strategic Thinking, Authority, Controls, Effective measurement techniques
Stakeholder Partnership	Cserhati and Szabo (2014),Pinto and Slevin (1987), Basu (2015), PMI (2010) Goodman, Speers, McLeroy, Fawcett, Kegler, Parker, Smith, Sterling, Wallerstein (1998), Heitschold, Reinhardt and Gurtner (2014), Ofori (2013), PMI (2014), Akeam, Guclu, Guler, Hekim and Ogunc (2012), Wu, Zhong, Mei (2011), McManus, Wood-Harper (2003), Benjamin and Levinson (1993), Stelzer and Mellis (1998), Pinto and Mantel (1990)	Client consultation, Client acceptance, Marketing, Scope Processes, Partnerships with stakeholders, Stakeholder Communication, Stakeholder Engagement, Performance culture alignment, Social and interorganisational networks, Process design, Customer focus and satisfaction, Supplier partnership, Social and Environment, Context, Changes in business landscape including regulatory change, competition and technology, Stakeholder Consultation, Stakeholder Support, Closure, Client involvement, Staff involvement in the process, Stakeholder commitment, Systematic process for change, Enhanced Understanding, collaborative relationships with partners, feedback from organisation and clients, Networking, Collaboration, Managing people through organisational change, Communicating objectives of the change efforts, Tailoring Initiatives

People Related Factors and Task Related Factors	Authors	Summary of Literature Reviews on Critical Success Factors in IT-Enabling Change
Team Resiliency	Cserhati and Szabo (2014), Pinto and Slevin (1987), Basu (2015), PMI (2010), Heitschold, Reinhardt and Gurtner (2014), Ofori (2013), Gumuenden and Lechler (1997), Smith (2003), PMI (2015) Akeam, Guclu, Guler, Hekim and Ogunc (2012), Wu, Zhong, Mei (2011), McManus, Wood-Harper (2003), Stelzer and Mellis (1998) Benjamin and Levinson (1993), Martinsons, Davison & Martinsons (2009) referenced by Akcam et al., (2012), Akeam, Guclu, Guler, Hekim and Ogunc (2012), Wu, Zhong, Mei (2011),)	Personnel, Handle unexpected crises, Communication, Resources, Competence, Commitment of team, Empowered Team, Integrated Planning, Culture, Information sharing, Training and Learning, Teamwork, Support of Individual Efforts, Agility, Conflict resolution, Employee involvement and empowerment, Tools and techniques, Culture and communication, Trust, Resources, Competencies, Problem solving, Managing the program, Managing the change, Organisation structure, Tailoring, Transition and embedding, Roles and responsibilities, Internal capabilities, Size of the change effort, Performance & cultural alignment, Unfreezing the organisation, Effective and Efficient team
Quality	Heitschold, Reinhardt and Gurtner (2014), Ofori (2013), Papke-Shields et al., (2010)	Quality data and reporting, Benchmarking, Performance and Quality
Time	Cserhati and Szabo (2014), Pinto and Slevin (1987) Ofori (2013), Papke-Shields et al., (2010)	Schedule/Plan, Technical Tasks, Realistic estimates
Cost	Cserhati and Szabo (2014), Ofori (2013), Papke-Shields et a.,l (2010)	Financials, Contract Strategy, Realistic estimates
Business Outcome	McManus, Wood-Harper (2003), Ofori (2013), King (2012), OGC (2005), Yeo (2002), Ombudsman (2011)	Clear Business case, Clarity of Vision, Definition and Objectives Clear Mission and Goals, Clear Outcomes., Shared understanding of outcomes, Good planning

Table 2.3 Literature Review of Critical Success Factors

This review indicates that there is minimal consistency in the nomenclature of critical success factors, especially those relating to people factors.

Further, these factors have been identified in the literature over the past two decades. Yet, they are not as yet commonly used.

What is needed therefore is the inclusion of standard nomenclature in a model that combines the people and task related factors that can be referred to by all levels in an organisation and in a programme. The models evaluated in this study provide such consistency and actionable reference of the criticality of people related factors for successful IT-Enabling Change Programmes.

2.5 IT-Enabling Change Programme Leadership

Organisations use IT as an enabler to disrupt and make change within an organisation. As IT-Enabling Change projects and programs are people centric, their leadership is key to successful delivery. These projects/programs may bring about cultural change in an organization or transformation of business practices. Driving this change can bring about uncertainty and ambiguity, and needs strong leadership to be successful.

As Lewis, Ramanaggi and Chapple (2009, p.12) stated the "successful implementation of change requires an understanding of the human response to change", but the critical success factor to manage the people and processes is leadership, (Basu, 2015). In recent research on technology enabled business transformation, Basu (2015) found the lack of leadership commitment was significant to implementation failure and determined that transformational leadership was critical to bringing about change. However, this is not a new revelation, as Pinto and Kharbanda in 1996 determined that strong leadership is essential to success. Leadership involves vision, motivation of others, bring about change, culture management, systems development and implementation and management of operations to support the change, (Toor and Ofori, 2008; Flamholtz and Randle, 2008). Leadership is about leading others through a challenging period, focusing on the business outcome and gaining a sense of achievement from the results. Appelbaum, St-Pierre and Glavas (1998) linked leadership, learning, motivation and productivity as enablers of change. Toor and Ofori (2008) found that leadership and management had definitional, conceptual, behavioural, functional differences; leadership was about change and management was about control. The authors believed that leadership and management are interrelated and that high performing organisations need exceptional leadership and superior management and a balance of both, (Toor and Ofori, 2008).

IT-Enabling Change Programmes need to develop strong leadership, strong board level political support, stakeholder partnership to manage the complexities of social interactions, and resilient teams. Programme leadership needs to manage shifting agendas and divergent interests and requires high levels of energy as they are constantly moving, adaptive and evolving, (Pelligrinelli, 2011). Programme leadership is reliant on relations with others, a multiplicity of interactions, and different patterns of decision making both within the team and with stakeholders. This leadership develops the future operating model, organisational change capability, a well communicated vision, organisation culture, strategic risks, quality, negotiation and commercials, as well as manage several projects, (OGC, 2011; Crawford and Hassner-Nahmias, 2010).

IT-Enabling Change Programmes need to be flexible, and adaptive in a changing business environment with effective stakeholder relationships, (Lycett, Fassau, Danson, 2004). IT-Enabling Change Programme leadership could be conceptualised as multi-faceted and having different styles.

Different styles of leadership can be referenced in the literature of IT-Enabling Change and projects, leading strategic change and complex adaptive systems, some of which are included in Table 2.4.

Literature Review of Program/ Project Leadership Styles	**Authors**
Adaptive Leadership	Heifetz and Linsky (2004), Heifetz, Grashow and Linsky (2009)
Authentic Leadership	Avolio, Walumbwa and Weber (2009), Lloyd-Walker and Walker (2011)
Champion to promote innovation	Shane (1994)
Change Leadership for complex strategic and organisational change	Flamholtz and Randle (2008)
Complexity Leadership	Hazy and Uhl-Bien (2015), Uhl-Bien and Marion (2009), Uhl-Bien, Marion and McKelvey (2007)
Enabling Leadership	Heaslip, (2014), Williams (2000), Uhl-Bien, Marion and McKelvey (2007), Kaplan (1999)
Goal Oriented, Involving, Engaging Leadership	Muller and Turner (2010)
Programmatic Leadership	Basu (2015)
Project Leadership	Cleland (1995)
Situational Leadership	Vroom and Yetton (1973)
Technical Leadership	Thite (2000)
Technology Project Leadership	Strang (2007)
Transactional Leadership	Thite (2000), MacGregor Burns (1978)
Transformational leadership	Basu (2015), Thite (2000), Keegan and Hartog (2004), MacGregor Burns (1978)

Table 2.4 Literature Review of Programme/Project Leadership Styles

Hazy and Uhl-Bien (2015) referred to leadership as a dynamic function, rather than an individual, to support complex systems. This furthers the thoughts by Uhl-Bien, Marion and McKelvey (2007), who referred to leadership as an interactive dynamic, separate from leaders as individuals who influence the dynamic environment.

Uhl-Bien, Marion and McKelvey (2007) created a conceptual leadership framework that divides leadership into three types of leadership and recognises the dynamic relationship in complex adaptive systems (CAS). The authors established three broad types of leadership in complex leadership theory (CLT):

- Administrative leadership that is grounded in the bureaucratic functions, hierarchy and control of an organisation. It manages the planning, coordination and organising of organisational tasks and activities. Administrative leadership provides finance, HR, marketing, public relations (Ford, 2010).
- Enabling leadership that provides structures and conditions that foster and enable the conditions that create adaptive leadership and facilitate emergence. It manages the

entanglement between administrative and adaptive leadership. It fosters the information flow and the interaction across the network as well as the interdependencies of agents.

- Adaptive leadership that manages the processes and activities through which change and innovation emerge. Adaptive leadership is an interactive dynamic that produces new and creative knowledge and generates the usage of the new knowledge or ideas through interdependent interaction.

Uhl-Bien, Marion and McKelvey (2007) believed that CAS and leadership were constructed in context of the organisation, divisions, environments and interactions and interdependencies. Context being organisational specific. As an IT-Enabling Change Programme is a structure within an organisation, it has its own context, structure and culture. Therefore the programme requires leadership at the varying levels of the structure. Further, due to the finite life of a change programme, the programme must rely on leadership to successfully enable stakeholder adoption.

The leadership in a programme is key to its success, and in particular Enabling Leadership. In particular from a programme management and governing perspective, Heaslip (2014), determined that Enabling Leadership secured stakeholder involvement and that Adaptive Leadership was needed for the uncertainty and complexity of programmes. The link between Adaptive and Enabling Leadership is obvious in an organization, for innovation and adaptivity to foster and is a between the programme and the administrative structures. In addition this leadership is needed to navigate and manage the tensions and interdependencies, (Uhl-Bien, Marion and McKelvey 2000; Ford, 2010).

In previous literature, Enabling Leadership was seen as sponsorship, mentoring, empowering and coaching, (Williams, 2000). Sponsorship included managing politics and relationships, the organizational 'do-how', gate-keeping and fixing, championing and protecting. Sponsorship also included sourcing, developing and leveraging the talent of the business for the benefit, fulfillment and growth of the business, (Williams, 2000). Williams (2000) argued that enabling leadership was a mindset, not just a competence and that it was needed for dynamic adaptive structures that need to operate collectively and constructively, and where traditional authoritarian leadership was counter-productive. The author went on to say that enabling leadership enabled resources to move out of their comfort zone without the risk of failure, through the agreement of the context and the timeframes, (Williams, 2000).

In her most recent research, Uhl-Bien (2014) discussed sponsoring and situated it between the adaptive system and the administrative system, thereby positioning sponsoring as enabling leadership Sponsoring in her discussion, meant protecting, championing, catalysing, pushing or

pulling through initial resistance, (Uhl-Bien, 2014). This research refers to sponsorship, as it applies to the collective sponsoring from each member within a group.

Therefore , Enabling Leadership protects and provides cover for adaptive initiatives through high level sponsorship and helps the adaptive leader to get to the right authority to help the initiative gain visibility, (Bryman et al., 2011).

As IT-Enabling Change Programmes are separate to an organisational structure, it is wrongly assumed that the sponsoring members for the programme will provide Enabling Leadership formally to the programme. However, this is lacking in the programme governing body making programme governance lacking leadership organisational authority, seniority and power within the organization.

Given that IT-Enabling Change programmes are conceptualised as complex adaptive systems, and that Uhl-Bien (2014) in her recent research included sponsoring, these complexity leadership concepts were applied and utilised in this research, to the change programme leadership and organisational structure for IT-enabling Change programmes and detailed in Chapter Four, Model Development.

2.6 Executive Sponsorship as an IT-Enabling Change Programme Success Factor

The absence of active senior and executive sponsorship or ineffective sponsorship has been found as a significant contributor to the IT failure rate. The PMI (2014) found that active, engaged executive sponsors was the top driver for project success, but less than two thirds of projects and programmes had assigned executive sponsors.

The term 'Sponsor' is slightly different in the main streams of the literature. A sponsor is an individual executive (or group of executives) who champions the programme initiative, provides resources and is accountable for the benefits, PMI (2013). Whereas, a sponsor according to OGC (2011) may be referred to as the Senior Responsible Officer (SRO) and is an individual who is accountable for the programme, its delivery and benefits and provides leadership. The SRO is usually part of the Programme Board, (OGC, 2011), or the Programme Governance Board, (PMI, 2013). This Programme Board is responsible for the achievement of goals, delivery within constraints, addressing risks and issues and benefits.

The OGC (2011) refers to a Sponsoring Group, as a group of senior managers who are responsible for the investment decisions, alignment of the programme to the strategic direction of the business, and championing the implementation to ensure the realisation of benefits. The Programme Board, reports to this Sponsoring Group (OGC, 2011). This sponsoring group is what Benjamin and Levinson (1993) emphasised regarding the need for sponsorship. So despite the differing nomenclature and hierarchical structures, the literature supports the fact that 'sponsorship' is needed.

The success factor 'executive sponsorship' as used in this research, refers to a sponsorship group comprised of actively involved and committed senior management and executives that includes the business process owner, the technology owner, an executive leadership team member, and key business leaders who own the areas of the business that will be significantly impacted by the organisational and technology changes. This sponsorship group provides enabling leadership and sponsorship of the programme.

There is increasing recognition of the importance of sponsorship in the literature, (Crawford et al., 2008). The sponsorship group legitimises and authorises the change. The sponsorship group needs to champion the change, communicate to other senior management and influence critical stakeholder groups, (Benjamin and Levinson, 1993). The Sponsorship Group champions and leads, enables and supports the change delivered by the programme and ensures that the outcomes and benefits are achieved. The Sponsorship Group provides the organisational context for the programme team, and ensures stakeholder involvement, business risk mitigation, strategic

alignment, effective and influential decisions, removal of roadblocks and that the solution is fit for purpose. The Sponsorship Group builds commitment to the programme at different levels within the organisation and prepares the organisation for change and helps then cope as they go through it, (Kotter, 2001).

Further, sponsorship is far more relevant in today's organisation as many of the complex IT-enabling Change Programmes, are enterprise wide thus lacking the traditional ownership in previous models, (Benjamin and Levinson, 1993). This issue was emphasized by Benjamin and Levinson (1993). The authors advocated that complex change requires one or more champions to provide or obtain funding and key resources, influence and bring together critical stakeholder groups, participate in key stakeholder reviews at critical points, communicate the benefits, encourage the team, and provide coaching and counselling on stakeholder and resource issues. These champions provide sponsorship as a collective. A sponsorship group provides enterprise oversight, and a cross functional view. It is comprised of leaders or persons of influence within the organisation. It includes those who can visualise the organisational information ecosystem, its people and the flow of information internally and externally, (Davenport, 1997 in Geyer, 2002). This in turn leads to a more robust design, as well as better scope and quality control.

This group needs to be exclusive for this initiative, (Basu, 2015). It is not one that is there just to approve the program, its deliverables, authorise payments and review results. It is one that needs to understand the change and actively assist in moving the organisation in the direction of the change and embedding the change in the behaviour into the culture, (Basu, 2015).

However, although sponsorship rests with a group, effective sponsorship is dependent on personal characteristics and attributes. These statements assume that the right type of stakeholders are involved in this sponsorship group and that they have effective leadership to foster success. The types of sponsorship characteristics required of individuals includes appropriate seniority and power, political savvy, courage and willingness to make connections or take on the battles, ability to motivate teams, excellent communication and compatibility with others, (Macdougall, 2014). This senior management support is different as it includes the "characteristics of accountability, responsibility, discipline, transparency, independence, fairness and social responsibility", Posthumusa, Solms and Mandela (2005, p.11).

Top management support or executive involvement has been recognised as a critical success factor since 1987, (Pinto and Slevin, 1989) yet we are still highlighting that senior management support, or sponsorship, is a crucial factor to the success of an IT project, (Young, 2005). With the known criticality of Executive Sponsorship in the literature, why then do less than two thirds of projects and

programmes have assigned Executive Sponsors, (PMI, 2014)? Could this be due to the perceived stigma of failure due to the high IT project/programme failure rate? Or could it be that we simply do not understand what it means to provide Executive sponsorship or what is needed to create it? These issues are addressed in this research.

2.7 Stakeholder Partnership as an IT-Enabling Change Programme Success Factor

The change from technologies, can be disruptive and invoke crises. Early research, such as Venkatraman's research in Geyer (2002), found that many companies focus on the technical connectivity rather than the process interdependence impacting buy-in and adoption.

For IT to be effective and efficiently implemented, stakeholders need to be involved throughout the system development lifecycle, (Lewis, Romanaggi, Chapple, 2010). A stakeholder is defined as "any individual, group or organisation that can affect or be affected by a programme", (OGC, 2011, p.59). Programme stakeholders may include employees, management, suppliers, industry associations, or vendors, depending on the nature of the change.

All stakeholders need to work together and collaborate in the journey of change, as an IT-Enabling Change Programme brings together many aspects into a dynamic environment with adaptive delivery. Engaging, managing, communicating with these stakeholders along the journey of implementation is key to successful change.

A stakeholder's contribution to the change programme is vital for design and adoption, hence a stakeholder partnership is critical for success. Working in effective partnership harnesses the benefits and value, and delivers the required outcomes, (Crawford, Aitken and Hassner-Nahmias, 2014). Bozarth's (2006) research compared three Enterprise Resource Planning (ERP) implementations, and found that stakeholder participation and commitment, especially from the lower levels, was paramount to obtain early buy-in and long term thinking about information requirements. Bozarth's (2006) research drew on several streams of literature including IT-Enabling Change, strategic information systems planning and ERP implementation, and operations management. Bozarth (2006) recognised that poorly managing the change process would have negative consequences and found in his comparison of three ERP implementations, that the one implementation that involved key users in the specification process maintained stakeholder commitment and participation.

Programmes also need sense-making and sense-giving to provide the basis for robust system design and change adoption. Sense-making is needed for managers to understand the context and business challenges, scope and scale of a programme, (Maylor et al., 2006; Gioia and Chittipeddi, 1991; Checkland, 2011). Sense-making is also needed to fully understand stakeholder needs and expectations, (Thiry, 2002). Sense-giving communicates the vision or outcome to stakeholders, and communicates the change in terms that make sense to the receiver, (Gioia and Chittipeddi, 1991).

Schaffer and Thomson (1992, p.89) framed this communication to "sharp and compelling expectations for performance achievements".

Benjamin and Levinson (1993) proposed eight principles for managers to consider when implementing IT-Enabling Change. These principles focused on a systematic process, adaption, organisational energy, size of change effort, stakeholders and sponsorship, prototype and change reviews. The final principle, Benjamin and Levinson (1993), was to periodically review not only the system implementation but the stakeholders and the change.

A systematic process for IT-Enabling Change Programmes is to follow a system development lifecycle (SDLC) that involves and develops a partnership with stakeholders along the journey. There are many approaches to system development such as 'waterfall' or, as in recent developments, the 'agile development'. In the system development lifecycle, there are relatively standard phases that can be recognised by stakeholders and can be used as the basis for scheduling. An SDLC enables the programme manager to ascertain the critical path and where and when activities can be scheduled to involve stakeholders. The phases outlined by Forsberg, Mooz, Cotterman (2005) include Requirements, Design, Build, Test, Deploy, Operate and the relationship of the phases is illustrated in the industry ICT 'V' model. Again, the research by Bozarth (2006) comparing three ERP implementations at three companies and found that the company who used the 'V' model with high levels of stakeholder participation and commitment, understood the specifications and therefore understood the prototypes of the organisational response, the size of the change effort, and the degree of organisational energy and precious organisational resource required for the change. D'Ortenzio (2012) found that all approaches highlight the need for leadership, stakeholder involvement and communication and that stakeholder involvement engendered commitment.

To develop stakeholder partnership for the IT-Enabling journey of change the identification of stakeholders is key, whether it be to contribute to the requirements and design or learning of the new system and stakeholder involvement in the change. For IT-Enabling Change, Benjamin and Levinson (1993) outlined a stakeholder analysis model that looked at the future states and three areas of change; process, technology and organisation/culture to then identify the key stakeholder groups for each of these categories. The author's stakeholder analysis model then analysed the stakeholder groups further, as to the benefits they would receive, the perceived resistance, and the commitment in terms of capability and readiness.

More commonly, the stakeholder identification models in the literature, are based on impact, power, interest and influence. The model proposed by Michell, Agle and Wood (1997), leveraged the foundational work of stakeholder theory by Freeman (1984), and included power, legitimacy and

urgency. The term 'legitimacy' refers to the social acceptability of the stakeholder, with power and legitimacy combining to give authority. The term 'urgency' refers to the time sensitivity and criticality of the stakeholder claim.

In programme management, the models are typically based on interest and influence, and power and interest. The stakeholder model outlined by the OCG (2011) is based on the stakeholder groups interest and influence grids with communication channels overlaid. The interest and influence grid is expanded in change management with a third dimension of stakeholder support, (OGC, 2014). The stakeholder group identification outlined by the PMI (2013) differs slightly and uses stakeholder power and interest grids. As such, these models provide four dimensions for stakeholder identification and analysis:

- Interest
- Influence
- Stakeholder support
- Power

These models are useful to identify the recipients of the change, the magnitude of the impact to them and the timeliness and methods of communication. These models are also useful to identify the stakeholders who could be invited to participate in the Sponsorship Group.

However, the key and vital step that is needed but missing from most stakeholder frameworks for IT system design, development and change, is to ascertain what is needed or wanted from the stakeholders, Kenny (2013, p.38). Ballejos and Montagna (2008, p.281) asserted that the "first emerging challenge in any software project" was stakeholders and that they were "critical to success".

The models referred to, are useful for the initial stakeholder identification, analysis and profiling. However, for IT-Enabling Change, in addition to the above stakeholder analysis, stakeholders at multiple levels need to be identified individually and on the basis of their contribution which then governs their participation in the IT systems development lifecycle. The inclusion of end users as stakeholders in the systems development was supported in early research by Mumford and Henshall (1979). In the research by Ballejos and Montagna (2008), the authors recognised the importance of stakeholders and that they are a source for the development of requirements. Any system design is based on requirements and as such they are critical to the successful usability and adoption of the system in the change journey. Whereas Wang, Lie and Mingers (2015) illustrate three different states of development, inputs, processing and outputs, in their investigation of stakeholder

identification based on Soft Systems Methodology (SSM), (Checkland and Howell, 1998). This research argues that individual stakeholders need to be identified by their contribution according to the states of development (Wang, Lie and Mingers, 2015). The identification of stakeholders for their contribution and participation in IT enabling change programmes, is an area that extends the current literature of stakeholder identification.

The right stakeholder individuals need to be identified and involved in the definition of requirements and processes, to ensure good design. Bozarth (2006) determined that it is not only participation and commitment that is required from stakeholders, but it is the stakeholders with the right expertise and knowledge of information flows and processes across the organisation. The Project Management Body of Knowledge (PMBOK) (2013) illustrated the connection between stakeholder identification and collection of requirements, as well as other documents such as the communications plan, risk plan, quality plan, procurement plan and stakeholder management for ongoing engagement. However, at the programme level, this is just as important as there are interdependencies in these aspects across multiple projects.

Having the right individual stakeholders contribution and participation would negate the three top causes of technical failure, which are poorly defined requirements, processes and design for IT projects (McManus and Wood-Harper, 2007). Those designing IT systems have to see and think of the system two to three years ahead, as the product lifecycle is on average three years. It is imperative for strategic and tactical thinking to be involved during this design. Failure to look ahead has resulted in many systems having been built, reflecting current use, and the systems are obsolete the moment they are commissioned.

The identification of the right stakeholders who bring the expertise that provides sound contribution to the programme is key to success, as well as their active participation. The identification and maintenance of stakeholders, individuals, groups and their profiles, needs to be a key area of focus for the programme manager. The programme manager needs to be supported by the change manager to ensure the engagement and communications activities are effective for the success of the programme.

Heller and Arozullah's (2001) research on implementing change in a clinical context, identified that one of the key success factors for programme delivery was systematic communication with all stakeholders. In addition the authors found that successful change was embedded in the organisation's structure, leadership and processes. Research by Pinto and Mantel (1990) identified that 'failure' was measured by client satisfaction, perceived quality, then schedule and budget with the ratio of 5:2:1. Client satisfaction in the research by Pinto and Mantel (1990) was composed from

items such as whether the system worked and would be used. The quality of a system and whether a system is fit for purpose is very dependent on the contribution provided by stakeholders.

The research by all these authors highlights that the identification of the right stakeholder individuals are needed for their contribution to the requirements and logical designs of the systems. Further, stakeholder participation along the journey of delivery and change in working collaboration, is key to successful delivery of IT-Enabling Change.

2.8 Team Resiliency as an IT-Enabling Change Programme Success Factor

Resiliency thinking is foundational for adaptivity (Curtin and Parker, 2014). Resiliency thinking treats actions to be learned from, and looks at the behaviour of a system that undertakes to capture innovation (Curtin and Parker, 2014). The authors believe that resiliency thinking provides an effective working context in rapid and unpredictable change with emergent outcomes. The pattern of co-evolution adaptations are driven by crises, collaborative problem solving, action learning and creative innovation, (Holling et al., 1998 in Curtin and Parker, 2014; Norris et al., 2008); Brown and Kulig, 1997). Norris et al., (2008) outlined resiliency as a process of adaptive capacities to lead to adaptation following a crises. Such capacities include effective communication, co-operation, conflict management, commitment, self-awareness, social support and cohesion, taking action, and leadership, Ganor and Lavy (2003), Brown and Kulig (1997). This is aligned with Adaptive Leadership, outlined by Uhl-Bien, Marion and McKelvey (2007) which is required for teams working in IT-Enabling Change.

Organisational resiliency was defined by Carmeli and Markman (2010) as "the capacity of an organisation to sustain and bounce back from a setback". Individual resiliency has similar definitions. Resilience for individuals, as defined in positive psychology by Duckworth (2013, p.14), is the "positive response to failure or adversity". Selligman (2011) who pioneered positive psychology found optimism to be key. Pipe et al., (2012) defined resilience as the ability to adapt to life's ever changing landscape and recover quickly from stressors and agility is the ability to do so". Resilient programmes, just like individuals and organisations, need good anticipation, risk management, communication, connections, decision making skills and new learning opportunities to have resiliency, Carmeli and Schaubroeck (2008).

Operating as a team can protect team members and make an individual less vulnerable thereby enabling a change programme to respond to change and crisis, (Heifetz and Linsky, 2002). Pauchant and Mitroff (1988) found in their research that where organisations were weak in crisis management, the organisation was typically internally focused, individualistic, defensive, or fixated on a course of action, and focused only on revenue from customers not the customers themselves.

Innovation brings about change, however both incremental and radical change and organisational change brings conflict, (Heifetz and Linsky, 2002). Wagner et al., (2010, p. 3081) found that there was a relationship between organisational culture and innovation programmes and that "the more supportive an organisation was to innovation and change the greater its potential for success". Change affects people's behaviour and may invoke a crisis. There may be resistance to change or

clashing of viewpoints, (Heifetz and Linsky, 2002). Therefore an IT-Enabling Change Programme team need to be resilient to cater for negative behaviour as it needs to bounce back from the negative and hostile forces it is encountering continually through the change.

Tetenbaum (1998) believed there were five essential ingredients for a management role in complex organisations, including building resiliency, managing the transition, destabilizing, managing the order, disorder, current, and future and creating a learning organisation. Action learning was found to assist in the development of less defensive attitudes and improve the ability to take criticism, (Pedler, 2008). Action Learning is "an approach to problem solving and learning in groups to bring about change in individuals, teams, organisations and systems", (Pedler, 2008, p.1). The cycle of action learning is to identify the problem, critically reflect on this problem, question, reframe, take action, reflect on the action taken, and learning from the experience. Hardacre and Keep (2003) found action learning to be a mechanism to develop manager's self and political awareness, confidence, leadership, control, resiliency, ability to cope with change, self-evaluation and teaming. In addition, they found that it enabled better decision making, constructive feedback, more delegation and proper application of disciplinary procedures.

Double loop learning was found to give rise to innovation, as the positive and negative feedback could provide an emergent pattern that would provide input to the formulation of strategy, (Stacey, 2011). Although single loop learning is adaptive, double-loop learning goes further and encourages self-reflection, inquiry and self-examination, (Argyris, 2002). Questioning one's own mental models and those that are shared with others means stepping back from the action and responding as events unfold, (Heifetz and Linsky, 2002). This mental model may be a mindset, a frame of reference, a recipe or a paradigm. It means unpacking assumptions, exploring one's values and beliefs and reflecting and adjusting the mental models to design action, (Stacey, 2011).

Winter et al., (2006) suggested that programmes demonstrate complexity, unpredictability, multidimensionality, thus requiring adaptability. Programmes need to be adaptive and learn from change using both positive and negative feedback loops. In the event of negative feedback the programme team needs resiliency and Adaptive Leadership. This research provides evidence that support these concepts.

2.9 IT-Enabling Change Programme Management as Complex Adaptive Systems (CAS)

IT-Enabling Change Programmes are made up of multiple interconnected elements and combine business processes, organisation, technology, information and culture, Benjamin and Levison (1993). To orchestrate delivery success this research conjectures that the focus on three people related success factors, executive sponsorship, stakeholder partnership and team resiliency, in addition to the three areas of constraint, time, cost and quality as well as adaptive and enabling leadership are required (Uhl-Bien and Marion, 2007). Bringing all these components together within all the dynamic environments is complex.

A novel body of literature has been considering IT programmes as complex adaptive systems (CAS) (Benbaya and McKelvey, 2006). McCarthy (2003) firstly identified IT application development projects as complex adaptive systems. Programmes have multiple projects and adding change and IT increases the complexity. As such IT-Enabling Change Programmes are conceptualised as complex adaptive systems (CAS).

CAS is grounded in complexity theory, (Stacey, 2011). Complexity theory argues that relationships in complex systems are not linear and to build an organisation requires innovation and creativity, teamwork and project orientation, knowledge and information sharing, diversity and strong core values, Tetenbaum (1998). These aspects are required in IT-Enabling Change Programmes. More recent research by Chae (2013) supports this literature by drawing upon complexity theory to conceptualise her framework for IT-Enabling services, as a complex adaptive systems (CAS).

For Information system development, Holland (1995) put forward a number of characteristics of CAS that have an interpretation in an IT-Enabling Change Programme in Table 2.5.

CAS Characteristics	**CAS Detailed Characteristic**	**CAS Interpretation in IT-Enabling Change Programmes**
Large number of components, agents	A complex adaptive system is a collection of individual agents with freedom to act in ways that are not always totally predictable and whose actions are interconnected so that one agent's actions changes the context for other agents, (Plsek and Greenhalgh, 2001). Once individuals and systems adapt and interact, they form a system that produces an orderly pattern of behaviour, (Stacey, 2011).	Agents in a programme could be considered as the technological and organisational resources that form to create the rules and the outcome. There are also technological rules of behaviour for software objects in system development. Each computer programme may also have a set of operating rules and instructions as to how it will interact with other programs.
Non Linearity and unpredictability	Non-linearity was one of the factors of self-organisation that was mathematically deduced by Prigogine, (Stacey, 2011).	Programmes are a collective of several projects that come together to produce an organisational outcome. The teams themselves rely on motivated competent staff who self-organise to get the work done.

		Interaction is non-linear and often spontaneous and small changes may have large effects and large changes may have small effects.
Adaptation to the environment and continual change	When there is a positive change, new resources can be provisioned.	In an IT-Enabling Change Programme, the resources and activities are adaptive through learning or evolution. Organisational competencies are reconfigured for evolving needs. Subsequent implementation then requires adaptable behaviour.
Self-organisation and emergence – new behaviour patterns emerge as consequences of agent interaction	Complex adaptive systems are less about structure and more about how behaviours shape and mould the system through the concept of emergence. Emergence is how a system evolves through patterns that form from a basic set of rules. This may be at the element level or at the system level. Following on from Orlikowski's research in 1996, Cha and Cha (2014) noted that IT-Enabling organisational transformation was emergent. Co-evolution as argued by Kauffman (1993) in McKelvey (2002), that "co-evolution is at the root of self-organising behaviour, constant change in systems, the production of novel macro structures and associated nonlinearities.". Co-evolution needs positive and negative feedback loops in a changing multidimensional or non-linear environment. The responses are adaptive and may be time-delayed. However the reaction is not predictive as it incorporates human behaviour, (McKelvey, 2002).	In an IT-Enabling Change Programme there are ongoing adaptions due to the complex relationship between IT and change. Solutions and the transformation are therefore emergent. Systems are embedded within other systems and they co-evolve through the development and implementation lifecycle. For example, co-evolution could be a number of systems that interact and evolve as a result of the interaction between IT and change.

Table 2.5 Literature Review of CAS and Programmes

Pellegrinelli (2011, p.236) determined that a programme was "emergent in nature" and shaped through ongoing interaction with its stakeholders and was shaped and informed through experience and learning. A programme is separate but internal to an organisation, requires different thoughts and actions and transfers information and new ways of working and thinking through sense-making and sense-giving, (Pellegrinelli, 2011).

IT-Enabling Change Programmes consist of agents, are non-linear in their interactions, dynamic, have self-organisation, an emergent nature, adaptive learning, and tend to co-evolve through the development and implementation lifecycle. These are key indicators of complex adaptive systems as outlined by Holland (1995) and McCarthy, et al., (2006, p.437).

This research extends the literature and converges IT, change and programme management. The convergence brings together multiple aspects and complexities and positions IT-Enabling Change Programmes as complex adaptive systems. Leading such a programme requires an adaptive leadership and considerable focus on the people related factors. This Action Research highlights all these aspects as well as providing the mechanisms to create them.

As such, this Australian research has implications to the field of IT and to those leading and managing strategic change initiatives and IT-Enabling Change Programmes.

3. Research Design and Methodology

Action Research is used to improve the organisational circumstances for stakeholders, and as a method has "become popular to study Information Systems", (Davison, Martinsons and Ou, 2012, p.763). Action Research is conducted in an original context and used to analyse and improve management practices and solve complex problems, whilst enabling learning from the change and reflection on the experience (Anderson et al., 2015).

Kurt Lewin initiated Action Research in 1946, (Coghlan and Brannick, 2010). Lewin conveyed "a science of action that involved a cyclical process" for the resolution of social/organisational issues, (Coghlan, 2011, p. 56). This was furthered by authors such as Schein, Gummesson, Argyris and Schon, Reason, Friedlander and Coghlan and Marshall as a collaborative process to make change, (Coghlan, 2011). This further work by these authors was described by Raelin (2009) as Action Research modalities, including Action Learning to create actionable knowledge with what Shon and Rein referred to as 'reflective transfer', (Coghlan, 2011; Friedman, Razer and Sykes, 2004). Argyris and Shon also recognised that the action modalities may give different levels of reflection referred to as double or triple-loop learning, (Raelin, 2009). All the action modalities explore tacit processes and provide interventions, (Raelin, 2009). The key focus of Action Research is on repeatable cycles of thought and action, with the action being in the present not the past, (Coghlan, 2011).

Dick (2002) in his discussion on Action Research, conveyed that its purpose was to learn from experience and bring about change. Vanderstoep and Johnston (2009, p.215) outlined that the goal of Action Research is evaluation or problem solving and believed that the research findings provide better lives for individuals and organisations.

Zuber-Skerritt and Perry (2002; p.173) emphasized three key aspects of action research; a group of people working together, people involved in the cycle of planning, acting, observing and reflecting on their work and producing explicit information and learning as a result of the experience. These Action Research aspects were articulated succinctly by Greenwood and Levin (2007) as; action, research and participation.

Action Research requires an attitude of inquiry, working and engaging with the organisation and a capacity for self-reflection, (Marshall and Reason, 2007). The inquiry and self-reflection opens up the assumptions, the purpose and sense-making of the actions. The Action researcher needs to have a willingness to explore both the expected and unexpected with an open inquiring mind. The Action Researcher needs to also have humility and transparency, recognizing the limitations of understanding and know how. These aspects, the author argued, provides the basis for the quality

of the research. I would like to think that these aspects have been taken into this research, and have displayed this by the flexibility to refine the models, to critically reflect, and to actively explore possible further refinements, the engagement with stakeholders, and to continue the process of learning.

Action Research comprises spirals of action research cycles, construct, plan, act and evaluate. These cycles may be overlapping. In addition, as demonstrated by Zuber-Skerritt and Perry (2002), there is a core cycle and another action learning cycle. For the action research included in this paper, an action learning set was created in the organisation as well as another created in my own organisation. The organisational learning set focused on problems at hand while the second learning set in my own organisation assisted in the learning and knowledge generation.

This is supported by McKay and Marshall (2001) who proposed the 'dual imperatives of action research' for information systems research, which included a dual cycle process; one for problem solving interest and the other for research interest. This conceptualisation of the dual cycles presents action research as two interconnected and interacting cycles with one focused on the problem and other focused on research.

Action Research is used for real-life problems and action, (Coghlan and Brannick, 2010). It is real-world action, (Raelin, 2009). Action research is known as 'action in research' as opposed to research about activities or accomplishments, (Coghlan and Coghlan, 2002, p. 222). Action Research became integral to the theory and practice of organisational development following Lewin's death, due to its focus on commitment to making a positive change, action research, collaborative inquiry and action, (Coghlan, 2011). The research within this thesis is about IT-Enabling Cultural Change which has an alignment with organisational development. Further, the system was complex and changing, which needed a delivery and a research approach that was not linear and could account for movement and uncertainty, (Brydon-Miller and Coghlan, 2014; Davis, 2007). As there is unpredictability and potential crises in any of the events that occur in a major change programme, it was determined that the cycles of Action Research were the most appropriate methodology to support this research.

Further, research around information management or information systems has been encouraged in the literature to consider action research, (McKay and Marshall, 2001). This is primarily due to Information Systems being used to enable operations and solve organisational problems, (Kock, 2007). These systems can be viewed as a complex web as many interact with others, and are comprised of hardware, software, databases, and people, (McKay and Marshall, 2011). However they "are fundamentally about human activity systems which is technology enabled", (Kock, 2007, p. 131-132).

An organisation is continually taking action to solve a problem and takes into account the uses of information systems. Drawing on experience, the learnings however often remain tacit with the individuals involved. Action Research is about taking action to improve a situation or solve a problem and testing theory however it generates explicit knowledge. As such, McKay and Marshall in Kock (2007) argue that the cycles of action inquiry and research and information system problem solving are blended and created a dual cycle, one for action and the other for research. The dual cycle is referred to as the dual imperatives of Action Research, (McKay and Marshall, 2001).

Kock (2007) referred to authors such as Baskerville and Wood-Harper, 1996, Lau, 1997, Myers, 1997, Avison et al., 1999, who had also expressed that Action Research was an important qualitative research method for the field of information systems/technology.

Further, as I was the programme director and the action researcher, I was directly involved in the IT-Enabling Change to drive cultural change into the organisation through the implementation of IT. As action researcher I was also cognisant of the models the research was evaluating. The change programme was a major IT-Enabling Change Programme. The multiple go-live cycles of the programme provided a natural action research spiral of cycles that provided me with the ability to compare and contrast the data collected at the conclusion of each cycle. Multiple action research cycles generated more generalisable insights, (Alvesson and Empson, 2008). As is the case with multiple case studies with clear design and careful comparison logic providing generalisations, the multiple action research cycles facilitates learnings of the evaluation and therefore generalisations (Easterby-Smith, Thorpe and Jackson, 2008).

As such, Action Research provided my research with an inquiry process that was supported by Action Learning. A combination of Action Research and Action Learning enabled my research within a cultural IT-Enabling Change Programme to evaluate the effectiveness of the 'Strategic IT-Enabling Change Programme Model' and its supporting models to determine if they could be of use to others in the same position as well as being instrumental in combatting the problem of the IT failure rate.

The construction of the Action cycles in this thesis, follow the four territories of experience outlined by Coghlan and Brannick (2010; p.13) that included:

- Intention (Construct): purpose, goals, aims, vision
- Planning (Plan): plans, strategy, tactics, schemes
- Actions (Act): implementation, performance
- Outcomes (Evaluate): results, consequences, effects

There were a number of considerations taken into account for this action research, including role duality, pre-understanding, ethics, staying focused, and rigour and relevance. The final challenge was narrative writing.

As I held three roles, that of the programme director, change leader as well as the action researcher, role duality was a challenge until the end of the first action research cycle when I shared my models with interviewees. Once participants really understood that the action research was not focused on them, but was focused on the evaluation of the models, they became less wary and more open as they realised that they personally were not being observed. Further, they had a greater understanding of the anonymity of the research. In hindsight, I perhaps could have shared the models earlier, as removing this uncertainty removed the challenge of role confusion, conflict and ambiguity, (Coghlan and Brannick, 2010).

Action Research raises another challenge regarding the multiple roles. As outlined by MacKay and Marshall (2001) in the dual cycles of action research, one for action and change and the other for research, both require different competencies. Action requires change and programme/project management competencies whereas the research cycle requires the researcher to have research competencies. My experience in change programmes coupled with the research enabled me to conduct this action research and multiple roles on my own. However, this does raise the question as to whether other action research needs to be conducted by a team who bring these three skills to the fore.

A pre-understanding of the environment, insights, tacit knowledge and experience with organisation assisted in the understanding of participants' responses and was very useful to precede the interviews and focus groups. However, as I was familiar and had close working relationship to all participants, I was conscious of trying not to make assumptions, take things for granted and influence the interview questions. To do this I drilled down on responses with questioning 'why' in a collaborative inquiry manner.

To ensure that there were no ethical issues, explicit agreement and informed consent was obtained from the organisation and individuals involved in this action research. All information has been treated confidentially and processes used to ensure that it is anonymous, private and protected. Information was gathered outside of billable working hours. All documentation that has been referred to for the action research such as minutes, agendas, meeting papers, have been those that would be available through standard government processes. All actions have been taken with honesty and respect, (Coghlan and Brannick, 2010). Information, resources, funds, position, deliverable acceptance are the power bases and politics of any organisation. The management of

stakeholder relationships and politics followed the governance and ethical principles of programme/project management, as they ensured protective controls were in place and that information was shared, (Seo, 2003).

The cycles of action research present reflection and learning for both the organisation and the action researcher. Where there is learning there can be growth, however this can be confrontational and may trigger negative emotions such as anger, fear of uncertainty and loss as it uncovers assumptions and challenges values, (Seo, 2003).

There is a significant amount of literature on the criteria of good Action Research and the dilemma of 'rigour or relevance' (Cassell and Johnson, 2006). Coghlan (2011) went on to assert Shani and Pasmore's (1985) criteria, which included the assessment of the context, the quality of the collaborative relationships, the process of cycles of action and the outcomes, and the creation of new knowledge. Shani and Pasmore (1985) in Coghlan (2011: p.71) outlined that it is the "learnings that need to be transferable and the process transportable" and not the results themselves. Participants involved in this study agreed that the use of the models, albeit with some direction, would be transferable to other practitioners and repeatable in other change programmes. However the participants acknowledged that it was difficult to gauge how much was dependent on the competency of the programme director/manager. This was partially validated in the fourth action research cycle.

Narrative writing was used in this action research, to engage others in the unfolding story of the change and research in action, as well as aid learning. Storytelling is used in educational research, problem definition and study of problems in timescales (Davis, 2007). Davis (2007) also determined that narratives can provide insights, aid reflection and recognise emerging issues therefore aiding understanding and communication. This was not a style I was familiar with and I had to diverge from the conventional formats. The second order narrative enabled a flexible and evolving inquiry process and a collective story that provides a chronology to the change programme (Creswell, 2007).

3.1 Methodological Approach

Qualitative research was the methodological approach chosen for this research, as it enabled me to question why and how, and to observe. It enabled me to identify, explore, describe and explain the phenomenon of a new way of thinking about the change programme leaderships of strategic IT change programmes, (Easterby Smith, Thorpe and Jackson, 2008, p. 96, 109).

This research employed structured Action Research within a cultural IT-Enabling Change programme to evaluate a 'Strategic IT-Enabling Change Programme Model' and its supporting models that

contained programme leadership and critical success factors. This was to determine if these models could assist practitioners who may be struggling with similar problems in the same field and if they were instrumental in combatting the problem of the IT failure rate. 'Thin slices' of this model were then used in further State Government Departments for further evaluation.

This study consisted of overlapping spirals of construct (diagnosis), planning, acting and evaluating in each action research cycle and were coupled with planned change, (Coghlan and Brannick, 2010). The cycles commenced with the same step this research advocates in the Stakeholder Partnership supporting model, context and collaboration. The Action cycles in this study were running concurrently at some stages as the cycles were overlapping in time.

The Action Research cycles are illustrated in Figure 3.1, page 49.

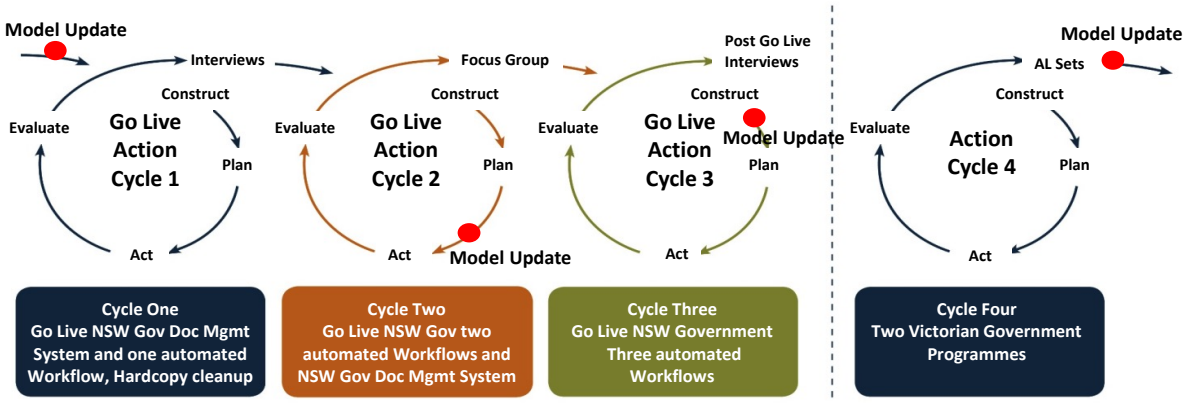


Figure 3.1 Action Research Cycles – Linear Display

Within each Action Cycle, there were a number of theories that informed the Construct, Plan and Evaluate phases within each cycle. The instrumental theories were used to make sense of the situation and context in the construct and plan phases, whereas the focal theories were used to drive the change process and organise thoughts, (Davison, Martinsons and Ou, 2012, p.769). Davison, Matinsons and Ou (2012) also introduced another step in the process for reflection, following evaluation. This is implicit in the action cycle shown below.

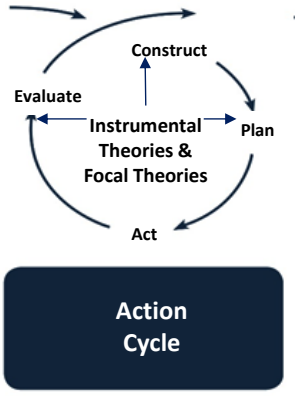


Figure 3.2 Canonical Action Research Process Model

For each action cycle, the research commenced with a diagnosis of the current environment and context to review the human and social phenomena and complex systems, referred to as 'Systems Practice' by Checkland and Howell (1997). The authors used a methodology for systematic systems thinking which was referred to as soft systems methodology (SSM) to do exactly this, (Checkland and Howell, 1997). McKay and Marshall in Kock (2007) believed that SSM in the field of information systems was pivotal to guiding researchers.

In addition to SSM, further instrumental theories that were pivotal in this research included Complexity Leadership Theory to apply to the different types of leadership to create the critical success factors, Complex Adaptive Systems to build an adaptive and resilient team, and Hofstede (1983) Cultural Dimensions and Davis' (1968) Organisational Behaviour Models as a basis for the cultural technology alignment required for Stakeholder Partnership. Key focal theories to drive the change process included Stakeholder Theory, which resulted in the critical success factor being renamed to Stakeholder Partnership, Change Theory and Systems Theory for the change and system development lifecycle integration to build Stakeholder Partnership and delivery successfully. These were supported by the industry methodologies for system development, change management and programme management.

Action Research as applied to the IT-Enabling Cultural Change Programme discussed in this action research, enabled the evaluation of the models through the four action cycles shown in Figure 4.1, page 56. In addition these cycles were supported by two action learning sets. The reviews were reflective and generated learning as well as change. Additional relevant areas of the literature were consulted to provide further insights to the study. Changes to the model and supporting models were evaluated at the conclusion of each action research cycle. The themes at the conclusion of each cycle were evaluated as well as the themes across the cycles.

As a result, the evaluations enabled improvements to the models that were then agreed by those involved in the study throughout the journey of change. The change programme and Action Research approach involved many stakeholders including a Sponsorship Group, multiple Stakeholder Advisory Groups, a Doctoral Advisory Group and two Action Learning Sets. All these groups were face-to-face and were the primary channels of change.

3.2 Data Collection

There are two main components of action research; the action research cycles, and the capture of data and information into explicit form, (Coghlan and Brannick, 2010). These can be seen as separate, however I found that it was necessary to have a clear understanding of the intent and information required to collect and evaluate the data.

During and at the conclusion of each Action Cycle, various research techniques to collect data. This included:

- Participant observation
- Discussions
- Action Learning Set
- Meeting minutes and communications
- Journal notes
- Reflection

The data collection methods employed included semi-structured interviews, observation, focus groups, discussions, document analysis, meeting minutes, journal notes, presentations and action learning sets. Observation included programme interaction with stakeholder groups, communication patterns, leadership, culture and the behaviour from stakeholders encountered by the team. This had a dual purpose, one for driving the change in the organisation and the other with relevance to the supporting strategic IT-Enabling change programme models.

At the conclusion of Action Cycle 1, 22 semi-structured face to face interviews were conducted with key programme team members, Governance members, Sponsorship Group members and key stakeholders, June to July 2014. Ethical approval, explicit agreements and informed consents were gathered prior to this process. This method enabled further exploration of particular areas and refinement of interview questions as required. The interviews were structured into a general section and three sections relating to each critical success factor. The questions themselves were mainly constructed using questions from measurement frameworks in the appropriate field of literature, and are notated as such. For example, the GRIT score for Team Resiliency was used, (Duckworth, 2013). All interview questions can be found in Appendix A. All interviews were conducted after hours so that there was no professional conflict. The time for interviews lasted between 45 minutes to 90 minutes and ranged due to the number of perspectives interviewees proffered. The interview

was manually captured, then transcribed into MS Word. At the conclusion of Action Cycle 2, a focus group with 28 key participants was conducted to form the go live review, July to August 2014. The focus group included programme team members, Governance members, Sponsorship Group members and key stakeholders. Notes were taken on whiteboards and flip charts. This information was transcribed into Excel. At the conclusion of Action Cycle 3, 12 semi-structured interviews were conducted with as many of the key participants interviewed in Action Cycle 1, November 2014 to January 2015. The interviews were conducted by phone, as the programme had concluded at that point in time. Again, each interview was transcribed into MS Word and coded to the to the critical success factors of the Strategic IT-Enabling Change Programme model. The transcripts were then imported into MS Excel and NVivo for data analysis.

In total, over the span of the Action Research cycles, there were 75 staff who participated in the reviews and evaluation; 34 individual interviews conducted, and 32 staff included in several small focus groups and 4 staff in one Action Learning Set and 5 staff in another.

Detailed attention was given to quantitative research in the above mentioned fields of research to develop the qualitative semi-structured interviews used within the Action Research, to evaluate and confirm the people related factors within an IT-Enabling Change Programme through inductive analysis. As I was progressing through the data collection, I went deeper into the areas related to the CSFs and the research questions were refined following each cycle. As a result, the interviews following action research cycle three were shorter as the questions were far more succinct than those following previous action research cycles.

As Gummesson (2000) in Coghlan and Brannick (2010; p.144) stated “from fuzziness to clarity is the essence of the spirals of action research cycles”. Programme documentation, such as minutes, agendas, presentations and reports were used to confirm the timeline of the activities and results and were collected throughout the lifespan of the programme. Reflections were captured separately in journals in private.

Results from 66 participants enabled me to gather a rich set of data. This translated to approximately 10 hours per person of research time. The data collected was specific to the action research objectives and within an organisational change framework. There was commitment to the programme and active participation.

In addition to the interviews and focus groups within the IT-Enabling Cultural Change Programme, data was gathered from four other participants in an action learning set in relation to the use of the models, or a ‘thin slice’ of the models given where they were in the lifecycle, within their own

strategic IT change programmes, (Pedler, 2008). This provides a sample size outlined by Eisenhardt of one to four for cross case analysis to provide credibility and determine transferability, (Easterby-Smith, Thorpe and Jackson, 2008). The participants for the action learning set and their programmes were selected from state government organisations in an alternate state. The state government organisations were selected from the state ombudsman's report, which investigated 10 ICT-enabled projects, across four departments (Barlow, 2012). The projects in this report were estimated at $2.74 billion. Three of these departments were represented in the Doctoral Advisory Group.

3.3 Data Analysis, Interpretation and Representation

The Action Research is presented chronologically and is comprised of four Action Cycles. During each Action Cycle, a thematic analysis was conducted by observing and recording patterns within the data. These were coded to the critical success factors of the Strategic IT-Enabling Change Programme model and a frequency analysis performed, (Creswell, 2007). Key themes were validated with participants either during or after the interview or focus group and some follow-up was required during data analysis. Further research was then conducted on the various aspects identified.

This analysis informed guidance to the literature, changes to the planning of the next Action Cycle, and refinements to the model and supporting models.

All interviews were transcribed into MS Word, treated with confidentiality, filed appropriately, the data protected and anonymised. Each interview transcript was read separately and re-read in conjunction with the other transcripts and a comparative content analysis conducted to identify patterns in the data. Notes were made of significant and repetitive statements from multiple participants. Categorical aggregation was conducted to establish further themes and patterns. The results were interpreted to make sense of the findings. The transcripts were then imported into MS Excel with worksheets per question and pivot tables constructed. They were also imported into NVivo for further data analysis. The data was coded to the to the critical success factors of the Strategic IT-Enabling Change Programme model and a frequency analysis conducted. The data gathered from the focus group was coded to the critical success factors of the model. Using these products provided the mechanisms to manipulate and search the data and graph the results. This process followed each Action Cycle.

The analysis of data from the action research cycles and the action learning set, provided detailed descriptions of the action research cycles, programmes and their context, (Creswell, 2007, p. 163). Inductive analysis of the data collected established the patterns and support for the themes, and results were coded relative to the models.

The results are discussed within each action research cycle, Sections 5.1.4, 5.2.4, 5.3.4 and 5.4.4 (Coghlan and Brannick, 2010).

Following the completion of the four Action Cycles, a cross Action Cycle analysis was conducted to look for similarities and differences among the cycles. Cross analysis of all the action research cycles was conducted to examine similarities and differences across the different programmes relative to the strategic IT-Enabling change programme model and its supporting models, Section 6 (Creswell, 2007, p. 245). The software applications, Microsoft Word, Microsoft Excel and NVIVO, were used for data capture, coding, data manipulation using pivot tables and data analysis.

The data analysis from the research will also be taken into the Action Learning Set to provide relevance of the data, and provide further insights, (Shrivastava, 1987).

4. Model Development

A Strategic IT-Enabling Change Programme is a delivery mechanism used by a business to achieve a business outcome.

The initial proposed Strategic IT-Enabling Change Programme Model includes the three people related critical success factors found in the extensive literature review. The critical success factors relating to IT-enabling Strategic Change Programmes expands on the core critical success factors of time, cost and quality which were used as a basis for this model. The model now includes the 'softer' critical success factors required for change programmes as well as the traditional task related success factors. The model was initially developed through professional experience has been applied in several successful IT-Enabling change programmes that have all varied in size and scope, including the delivery of national infrastructure with industry change, an organisational restructure of 250 IT professionals, and the implementation of an organisation's ICT strategy to develop of organisational capabilities, products and services.

The critical success factors relating to IT-Enabling Strategic Change, were initially crafted in August 2009, at the conclusion of an IT-Enabling Organisational Change Programme. The initial critical success factors included:

- Sponsorship and Governance (combined)
- Stakeholder Interdependencies
- Competent Teams

Change Programme Leadership was initially thought to be an inherent part of the strategic IT-Enabling change programme model, the critical success factors and their supporting models. However, during this research Change Programme Leadership was also considered a key critical success factor.

The critical success factors and the supporting models were reviewed in detail at the conclusion of another successful IT-Enabling Organisational Change. The Competent Teams critical success factor was renamed to Team Resiliency. The Team Resiliency supporting model was finalised in May 2011, and was presented at the PMA 2012 Conference: From Strategy to Delivery 11-13 July 2012, Fitzwilliam College, University of Cambridge. The Team Resiliency model was refined following the doctoral module of Change of Crisis, 2012.

The Action Research documented in this study commenced in July 2013, subsequently augmented and extended the proposition by seeking theoretical validation and creating the supporting models of Executive Sponsorship and Stakeholder Partnership These supporting models provide the PM

with the knowledge of how to build the critical success factors in the Strategic IT-Enabling Change Programme model. The literature, as summarized in Table 5.3 supported and aided the refinement of these models throughout this study. The study included three Action Cycles in an IT-Enabling Cultural Change in a State Government Department, with an initial emphasis on stakeholder interdependencies, with a further Action Cycle in two more State Government Departments.

As a result of the focus within this programme, the 'Stakeholder Interdependencies' critical success factor was renamed to 'Stakeholder Partnership' in December 2014. Further, Executive Sponsorship and Governance are shown separately, although in reality, these may or may not be one and the same group.

Through the study conducted, the key critical success factors became:

- Executive Sponsorship & Governance
- Stakeholder Partnership
- Team Resiliency
- and in addition, Change Programme Leadership

These critical success factors with a programme focus on Business Outcome were included in the Strategic IT-Enabling Change Programme Model.

The initial model is shown in Figure 4.1, page 56, and the final model is shown in Figure 6.1, page 144.

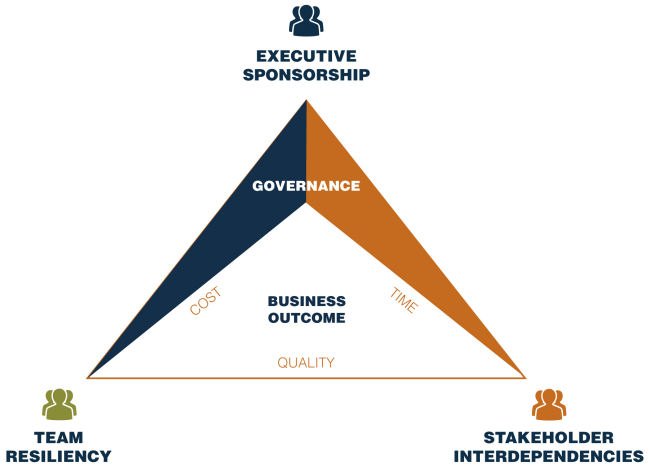


Figure 4.1 Initial Strategic IT-Enabling Change Programme Model

As seen from the literature, summarised in Table 2.2, the factors used here include the people related factors and task related factors. All of these factors need to have focus during the delivery of a successful IT-Enabling Change Programme. The entire model includes several success factors; Executive Sponsorship and Governance, Stakeholder Partnership, Team Resiliency, Time, Cost and Quality. These factors are interdependent and need to work together to achieve the business outcome.

Each critical success factor is supported by a model that guides the building of the CSF. The supporting models are discussed in the following sections and in the documented Action Research. The supporting models include programme leadership, as the delivery of IT-Enabling change needs strong change leadership. As seen in the broad literature review there were many styles of leadership for leading strategic change and complex systems. Due to the complexity of Strategic IT-Enabling Change Programmes, the complexity leadership theory by Uhl-Bien, Marion and McKelvey (2007) was applied in this study.

4.1 IT-Enabling Change Programme Leadership

The three types of complexity leadership, Enabling Leadership, Adaptive Leadership and Administrative Leadership are applied to the programme leadership and programme organisational structure of Strategic IT-Enabling Change Programmes in this study.

- Enabling leadership for the Sponsorship Group which is sponsoring or championing the change programme and facilitating the IT-Enabling Change Programme to engage stakeholders and deliver value
- Adaptive leadership for the programme team. The programme team is the adaptive system which develops the new innovation and generates new ideas from which there is emergence
- Administrative leadership for the Programme Board and the organisational stakeholders. The board and the organisation forms the administrative system which is focused on control, efficiency, aligning processes and exploiting systems to gain economies of scale.

The application of CLT to the programme organisational structure is illustrated in Figure 4.2, page 58.

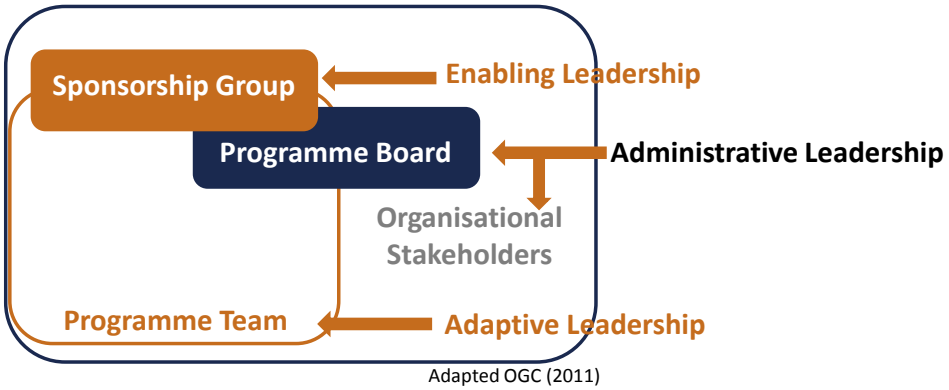


Figure 4.2 Complex Leadership Theory related to Programme Leadership

4.1.1 Enabling leadership – Sponsorship Group

Kaplan discussed leadership that was both forceful and enabling, (Kaplan, 1999). Enabling leadership was to influence and involve other people, set the direction, get commitment, empower subordinates to do their role and tap into the strengths and capabilities of others, (Kaplan, 1999). Enabling Leadership as outlined by complexity leadership theory (CLT) and aligned to the Sponsorship Group, manages "the entanglement between the administrative and adaptive function" and operates as the interface between the organisation and the programme, (Uhl-Bien and Marion, 2009, p.635). Enabling leadership is therefore seen to be vital to bridge the gap between the adaptive and administrative functions.

Enabling leadership enables the adaptive leadership and function of the programme to thrive and be empowered to build a creative, energetic and resilient team as well as deliver an innovative outcome. It creates the environment in which change and emergence can perform, (Higgs and Rowland, 2005). The Sponsorship Group also creates effective systems to enable the emergent outcomes generated by the programme, to be integrated into the bureaucratic function. The enabling leadership therefore has a bidirectional role, to protect and foster the programme as well as to integrate the outcomes, (Uhl-Bien and Marion, 2009). It shields and protects the concepts, time and effort from the prevailing organisational administrative culture and practices, (Pellegrinelli, 2011). There is also an element of mediation provided by the Sponsorship Group, as the adaptive nature of a programme is not well understood or embraced by a bureaucratic organisation. Therefore the Sponsorship Group may protect the programme from crises, or political behaviours, or suppressive rules, which may derail the adaptability and delivery, (Uhl-Bien and Marion, 2009).

The Sponsorship Group champions ideas and technologies produced by the programme and brings them to the attention of the administrative leaders and rallies their support, (PMI, 2014). The Sponsorship Group provides the political support needed for the programme and acts as a

communication channel. The members include the organisational process and system owners and key leaders of the organisation who can influence early adoption. The Sponsorship Group could be likened to the 'Guiding Coalition' in John Kotter's transformation process, (Kotter, 1995) and has gravitas to carry the programme.

In summary the sponsorship group protects and enables the adaptive programme team. The sponsorship group understands how an adaptive programme needs to function. Enabling leadership provided by the sponsorship group enables the programme to be adaptive whilst it liaises with the administrative leadership exhibited in governance and the organisation.

4.1.2 Adaptive Leadership - Team Resiliency

Adaptive leadership manages the processes and activities through which change and innovation emerge, (Uhl-Bien, 2007). Adaptive leadership is looked-for in the programme leader, whether the programme director or programme manager. The Programme leader needs to build an agile environment and team to cater for adaptive change. The programme leader motivates and marshals resources, negotiates with stakeholders, "cheerleads the development" while keeping focused on the end game, (Pinto and Kharbanda, 1996, p.52).

Adaptive leadership is required for the development of the team and the implementation of their developments. Adaptive leadership builds an IT enabling change programme that comprises multiple projects as adaptive functions and produces a transparent flow of information and exchange of ideas, furthering innovation, change and technologies across these functions, (Uhl-Bien and Marion, 2009). There are multiple interdependencies and dependencies in a problem solving, dynamic and complex environment that generates innovation which then requires the dissemination of the new ideas and their adoption. There is emergence from the adaptive function as there is change within a programme in addition to its causing change to an organisation. (Uhl-Bien and Marion, 2009) found that the adaptive function and leadership strengthened under appropriate enabling conditions.

Adaptive change, according to Uhl-Bien et al., (2007), is where there is the clash of the current and future ideas, information and technologies. Adaptive change is created through the journey of IT implementation, especially with the modern methods of IT systems development. This journey is a systematic process that includes development of a vision and the processes and resources required to realise this vision, (Benjamin and Levinson, 1993). Adaption requires the adjustments between the organisation, the organisational processes and the technology. Depending on this mix, will depend on the size of business change or the amount of system development that is required, (Benjamin and Levinson, 1993).

Research by McManus and Wood-Harper (2003) identified that the complexity of change was increasing due to factors such as the volume of code, the geographical distributions, the number of changes across baselines, the amount of communication. The dynamic systems being managed include IT systems, stakeholders, teams, change, multiple projects and multiple delivery organisations, that all need to come together at a point to produce an outcome. All these dimensions move at different rates and not necessarily all in unison, therefore creating complexity and unpredictability. The outcome may or may not achieve what was initially envisaged.

Pellegrinelli (2011, p.236) determined that a programme was "emergent in nature" and shaped through ongoing interaction with its stakeholders and was shaped and informed through experience and learning. Further, following on from Orlikowski's research in 1996, Cha and Cha (2014) noted that IT-Enabling organisational transformation was emergent and that there were ongoing adaptions due to the complex relationship between IT and change. Emergence is how the system evolves through patterns that form from a basic set of rules. This may be at the element level or at the system level. Systems are embedded with other systems and they co-evolve through the development and implementation lifecycle.

Co-evolution as argued by Kauffman (1993) in McKelvey (2002), that "co-evolution is at the root of self-organising behaviour, constant change in systems, the production of novel macro structures and associated nonlinearities." For example, co-evolution could be a number of systems that interact and evolve as a result of the interaction. Co-evolution needs positive and negative feedback loops. The responses are adaptive and may be time-delayed. However the reaction is not predictive as it incorporates human behaviour, (McKelvey, 2002).

A complex adaptive system is self-organizing and learning. Action learning is key for team resiliency and change, and to contribute to the emergence and co-evolution of a programme. This enables the emergent nature of a programme to be creative, innovative and implement change. Action learning is also renowned for the development of leadership, (Pedler, 2008). So, including Action Learning in the supporting model for team resiliency enables the programme to develop adaptive leadership.

4.1.3 Administrative Leadership - Stakeholder Partnership and Programme Governance

Stakeholder Partnership

Dependent on the organisation, stakeholders within the organisation may be more familiar with the administrative leadership and management as defined by Uhl-Bien, Marion and McKelvey (2007). Administrative leadership is top-down decision making for the organisation, concerned with

planning, managing, resourcing and structuring organisational initiatives, (Uhl-Bien, Marion and McKelvey, 2007). Administrative leadership is focused on efficiencies, multiple control systems in place, similar processes in place across the organisation to take advantage of economies of scale, exploit existing systems and have bureaucratic communications and methods, (Uhl-Bien, 2014). Uhl-Bien and Marion (2009) likened administrative leadership to executive and organisational level bureaucracy, hierarchical structures, co-ordinated by rules, impersonal and functionally siloed.

Change programmes will interrupt this status quo and cause organisational disequilibrium, (Heifetz and Linsky, 2002). There will be tension between the administrative and adaptive leadership but the formal and informal systems need to operate in tandem, (Uhl-Bien, 2007; Uhl-Bien, 2014). The adaptive leadership of the programme needs to adapt to work with the administrative leadership in partnership with stakeholders, (Uhl-Bien, Marion and McKelvey, 2007). The author refers to this as the administrative adaptive interface.

The enabling leadership of the sponsorship group champions, protects, sponsors, facilitates and enables the transition and adoption of the enabling innovation in the adaptive system into the administrative operational systems, (Uhl-Bien, Marion and McKelvey, 2007). The enabling leaders protect the programme from politics and top-down influences, forces, crises, pressures, conflicts, threats that may derail the adaptive programme (Uhl-Bien, Marion and McKelvey, 2007). Enabling leaders ensure that there are enough resources, information, staff, supplies, money, for innovation to occur, (Uhl-Bien, Marion and McKelvey, 2007). Uhl-Bien (2014) describes this as where emergence and a new order is created, or where adaptive outcomes emerge.

Programme Governance

The traditional Programme Governance structure includes a Steering Committee or a Programme Board, for managing, planning and controlling the programme in a manner reflective of the corporate organisation, (OGC, 2011). The Programme Governance bodies tend to exhibit Administrative Leadership due to its role and responsibilities.

The Programme Board, is responsible for the delivery and performance of the programme and ensuring that it delivers and achieves its goals. The Programme Board supports the authority and control over the programme as a whole and ensures that the programme delivers within its defined boundaries of cost, adoption and realisation of benefits, (OGC, 2011). The Programme Board provides support to address and resolve risks, issues and dependencies. In addition it ensures that there is enough funding and resources for delivery, (PMI, 2013). The Programme Board approves

the deliverables of a programme and ensures the compliance to reporting and control processes, and organisational policies and procedures, (PMI, 2013).

The membership of the Programme Board will always include the programme sponsor, and may include executive level stakeholders, representatives of corporate functions, and representatives from important stakeholder group and the programme management office. It may also include key suppliers, the programme manager, the business change manager and leaders of sub-programmes or projects, (PMI, 2013).

Grenny, Maxfield and Shimberg (2007) found that if projects did not have good governance 78% ran over budget, 87% missed their deadlines and 80% failed to achieve their deliverables. However, the authors found that in only 20% of projects could issues of concern be raised with the sponsor or the owner of the project in this type of governance structure with this type of leadership. This was supported by Macdougall's (2014) research that found that the challenging questions could not be raised with the Programme Board because the focus was on compliance.

Due to the composition of the Programme Board, the leadership of a Programme Board tends to bring with it the organisational administrative leadership, (Uhl-Bien, Marion and McKelvey. 2007). The domination of administrative leadership and technical change poses a significant risk to an IT-Enabling Change Programme as the programme needs to be dynamic and adaptive, (Heifetz and Linsky, 2002). To mitigate this effect the programme therefore requires the enabling leadership of a Sponsorship Group to protect the adaptive programme, (Heifetz and Linsky, 2002; Uhl-Bien, Marion and McKelvey, 2007).

4.2 Critical Success Factor Executive Sponsorship Supporting Model

Executive Sponsorship and Governance may be combined in one body for the programme. However, as determined through this study there are two distinct roles and responsibilities and there are different leadership styles required; Enabling and Administrative Leadership. This study separated Executive Sponsorship into a separate body, defined as the Sponsorship Group, which is shown in Figure 4.2, page 58. The Sponsorship Group comprised executive and senior level members of the organisation. This group provided enabling leadership and executive sponsorship, while the Programme Board provided governance.

To delineate between Executive Sponsorship and Governance, I relied on the existing methodologies, (PMI, 2013; OGC, 2011). Table 4.1 highlights the differences determined between

the governance and sponsorship bodies, as well as the portfolio governance body through the literature. This table informed Action Cycle 1, discussed in the next section and the Action Cycle 4.

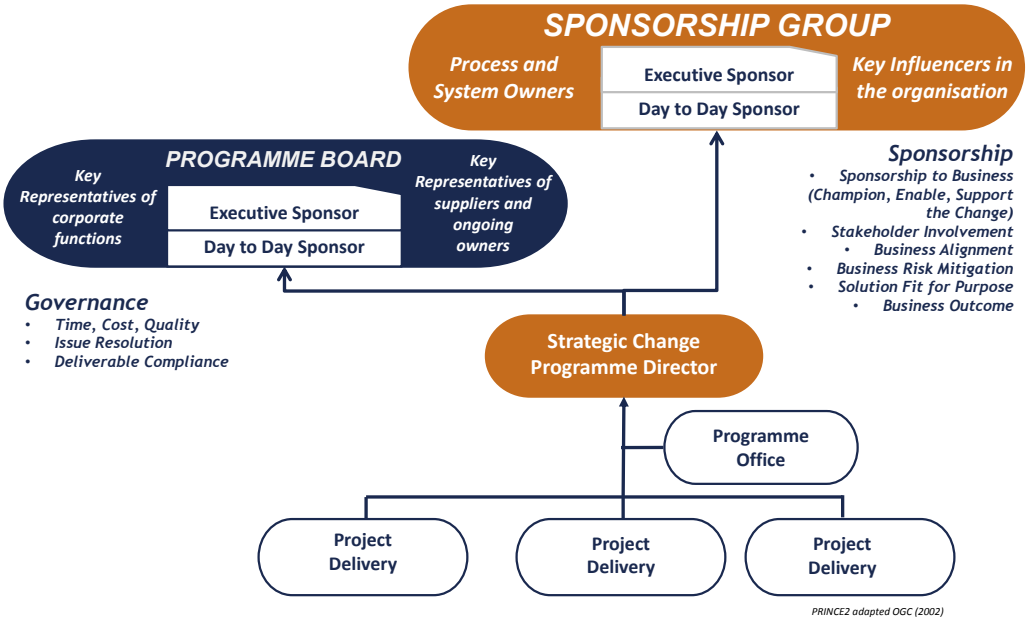


Figure 4.3 Sponsorship Group and governance organisation structure

Governance Programme Board	**Sponsorship Group**	**Portfolio Prioritisation Group**
Provide programme approval, endorsement and initiation	SRO makes the investment decision. Sponsorship Group provides top level endorsement of the rational and objectives for the programme	Ensure that the department's initiatives are aligned with the department's business strategies
Ensure programme funding and success criteria	Champion the programme and implementation of new capability	Ensure the portfolio is balanced, resourced and financially viable
Approve programme approach and plans	Ensure continuing alignment of the programme to the organisation's strategic direction	Ensure that the portfolio evolves and is prioritised to reflect changes in the business, or business priorities and reallocation of resources
Authorise, monitor and oversee programme progress	Provide guidance for the implementation approach of the programme to achieve the business outcomes/objectives	Assess any major changes to the Project Governance Framework or ICT policies
Define the acceptable risk profile and risk thresholds	Enable and facilitate the delivery of change	Monitor ICT compliance to policies, standards and guidelines
Ensure the programme delivers within cost, time, scope, benefits	Provide overall strategic guidance and direction for the programme and strategic alignment	Receive investment appraisal and portfolio reports to review the portfolio
Resolve strategic and directional issues between projects to ensure progress of the programme	Provide leadership by example for the change	Review the impact analysis of new technologies on the department's business
Provide assurance for operational stability and effectiveness during delivery	Monitor the progress of the programme against strategic objectives	Monitor the benefits of the department initiatives
Support the SRO and take	Identify and monitor strategic	Review the impact analysis of

Governance Programme Board	**Sponsorship Group**	**Portfolio Prioritisation Group**
ownership for stakeholder engagement within own area of the organisation	business risks and issues relating to the business and the programme	proposed initiatives driven by changes to legislation, regulation or WOVG policy
Support the SRO and provide business change managers from the areas affected by the change	Commitment and endorsement of the programme at executive level, for communications and events	Review and approve/reject: • The prioritised project and programme portfolio of current, new and pipeline projects • The processes and practices within the portfolio delivery cycle • The portfolio strategy and delivery plan • New business cases and resource strategies for major ICT initiatives ensuring compliance with project governance and that they are fit for purpose • The strategic business architecture blueprint • Initiative recommendations
Ensure programme compliance with reporting and control processes	Communicate information about the programme to stakeholder groups and resolve stakeholder issues	
Ensure that there is an effective issue and escalation process	Provide those people directly involved in the programme with guidance on programme business issues	
Establishment of minimal acceptance criteria for success and the communication and endorsement of this	Resolve any strategic and directional issues associated with design, construction and/or operational requirements related to the delivery of the program	
Ensure that there are appropriate governance meetings and activities, such as meetings, reviews and health checks	Assure and endorse the programme major deliverables and ensure that they are fit for purpose	
Provide advice and direction to the Programme Director/Manager, as required	Ensure the program's scope aligns with the requirements of the stakeholder groups and endorse any changes in scope	
Resolve dependencies and any issues with other programs, projects or operational work	Ensure effort and expenditure are appropriate to stakeholder expectations	
Approval of the major deliverables, and changes to scope	Identify any business issues that have major implications for the program	
Ensure resources are available for planning and delivery within the program	Reconcile differences in opinion and approach, and resolve disputes arising from them	
Ensure business continues to operate effectively during the	Take on responsibility for any whole-of-government issues associated with	

Governance Programme Board	Sponsorship Group	Portfolio Prioritisation Group
period of change	the program	
Approve recommendation for programme closure	Ensure that all parties are discharging their relevant responsibilities	
	Provide commitment to the schedule	
	Gain commitment from the programme team to the schedule	
	Ensure the integrity of benefit profiles and realisation plan	

Table 4.1 Governance, Executive Sponsorship and Portfolio Prioritisation

4.3 Critical Success Factor Stakeholder Partnership Supporting Model

The supporting Stakeholder Partnership 'V' model, has been developed here to bring together a change lifecycle and the system development lifecycle. Table 4.2 provides a tabular detailed interpretation of this model and shows the clear linkage between the theoretical elements of change and the traditional programme/project management. More significantly Table 4.2 highlights the gaps between theory and those relating to IT-Enabling Change. Using the industry standard IT 'V' model as a basis, it was then extended to include the key areas of stakeholders' engagement. The change cycle overlay and the extensions to support stakeholder partnership, can be seen in Figure 4.3, page 63, and are colour coded in tangerine. Details of each of these enhancements has been included in Table 4.2, page 72. The Stakeholder Partnership supporting model was iteratively refined during this action research.

The Stakeholder Partnership supporting model shows the main steps and deliverables for the change and system development. The model begins with the change lifecycle stage of contextualisation and produces a context of operations. This is immediately followed by the cultural technology alignment. The counterparts for these two products are transition and business outcome, which provide proof or assurance that the products of context of operations and cultural technology alignment are acceptable and working for the business. Each of these steps have multiple activities, with the design and testing steps being of an iterative nature. Programme Leadership is required throughout the lifecycles. The philosophy behind the model is based on an iterative delivery and therefore continues with the next generation in another iteration. This iteration supported the delivery and change approach detailed in the Action Research.

Working with stakeholders through the change and in the specific areas highlighted in this model, built a strong stakeholder partnership for this IT-Enabling Change Programme.

Figure 4.4 Stakeholder Partnership Model for IT-Enabling Change

The programme management lifecycle was needed to deliver this IT-Enabling Cultural Change. However as it was not possible, due to legibility, to overlay the programme management lifecycle in this supporting Stakeholder Partnership model, a supporting table was constructed, Table 4.2. Table 4.2 aligns the change cycle, the system development lifecycle and the programme management lifecycle. Table 4.2 was compared to the alignment used within the PMI Programme and Change Lifecycles, (PMI, 2013), and Programme Lifecycle, (OGC, 2011).

The lifecycles in Table 4.2, and the Stakeholder Partnership 'V' Model were used in the Action Research and refined throughout the programme. Table 4.2 has been used to inform the Action Research Cycle discussions in the subsequent sections.

Table 4.2, page 72, is pivotal to the alignment of the IT-Enabling Change, System Development and Programme management lifecycles used in the Stakeholder Partnership supporting model, Figure 4.4, page 67. Table 4.2, page 72, also aligns these lifecycles with the models and theories found in the Change Management and Programme Management literature. For example, the first phase in the IT-Enabling Change Lifecycle discusses contextualisation. Only Anderson and Anderson's (2001) model of change was found to align to the first phase and none were found to align to the second. The activities highlighted in blue in Table 4.2, page 72, are the successful activities found through

this Action Research to be needed for the successful delivery of change programs. These activities therefore extend the existing literature and methodologies.

IT-Enabling Change Lifecycle used in this study	**System Development Lifecycle used in this research**	**Programme Management Lifecycle used in this study**	**Change Models (D'Ortenzio, 2012)**	**PMI Programme Management**	**OGC Programme Management**
- Contextualisation - Current business context; functions, stakeholders, systems and processes, culture, people, behaviour, relationships, interactions, business cycles over time and outputs - Information Flows - Roles and responsibilities - Defining real business problems, their location, impacts and extent - Workshop 1 validation of current functions and process	- Context of Operations	- Establishment - Sponsor (Day to day and Executive) - Programme Mandate	- Prepare to lead the change (Anderson and Anderson 2001) - Assess the situation to Determine Design Requirements (Anderson and Anderson 2001)	**- Programme Definition;** Programme Formulation; Sponsor **- Formulate Change**	**- Identifying a programme;** Programme Mandate, SRO
- Cultural and Technology Alignment - Competency assessment; organisation, people	- Cultural and Technology Alignment			**- Formulate Change**	
- Conceptualisation - Business Strategy & Outcomes, and supporting objectives - Strategic Intent - Future high level requirements - Future functions and processes - Future roles and responsibilities - Impact Assessment; organisation, individuals, processes, policies,	**- Concept of Operations**	- Planning & Definition - Blueprint Design and Delivery - Programme Brief - Business Case - Programme Organisation - Sponsorship Group - Programme Governance - Programme Plan - Resource Plan	- Create the organisational vision, commitment and capacity (Anderson and Anderson 2001) - Design the Desired State (Anderson and Anderson 2001) - Analyse the Impact (Anderson and Anderson 2001) - Plan and organise	**- Programme Definition;** Programme Formulation - Programme Preparation Governance, **- Formulate Change** **- Plan Change** - Agents (integrating the change in their respective environments	**- Identifying a programme;** Sponsoring Group, Programme Brief **- Defining a Programme**

IT-Enabling Change Lifecycle used in this study	System Development Lifecycle used in this research	Programme Management Lifecycle used in this study	Change Models (D'Ortenzio, 2012)	PMI Programme Management	OGC Programme Management
information - Change Strategy - Current Future State (future overlayed onto current) - Stakeholder Group and Individual Identification - Communication Plan - Business and system rules		- Financial Plan - High level schedule - Benefits Plan - Risk Register - Issues Register - Design Decision Log - Stakeholder Engagement Plan - Status Reports - Process Ownership - Facilities Plan	implementation (Anderson and Anderson 2001) - Increase urgency (Kotter 1996) - Build guiding team (Kotter 1996) - Develop vision (Kotter 1996) - Communication for buy in (Kotter 1996) - Empower Action (Kotter 1996)	p11)	
- Requirements walkthrough with stakeholder groups. alignment of interpretations and assumptions unpacked	**- Detailed Requirements**	- Delivering the Capability - Glossary of Terms - Design Principles - Detailed Requirements - Requirements Traceability - Detailed Process		**- Programme Benefits Delivery** **- Implement Change**	**- Delivering the capability** **- Managing the tranches** **- Realising the Benefits**
- Stakeholder interdependencies schedule - Workshop 2 agreement to future process design	**- Solution Design** - Functional Specification - Workflow Detailed Design	- Design Decision Log - Interdependencies schedule - Component Diagram - Procurement Options, Plan, Supply - Project Plans - Activities schedule (Gantt) - Knowledge of product design, functions, product constraints and global configuration - Assumptions unpacked		**- Implement Change**	**- Managing the tranches**

IT-Enabling Change Lifecycle used in this study	System Development Lifecycle used in this research	Programme Management Lifecycle used in this study	Change Models (D'Ortenzio, 2012)	PMI Programme Management	OGC Programme Management
- Socialisation - Workshop 3: Prototype review - Change approach validation - Design close out event - Communications management - Capture of Release 2/Next Generation Requirements	**- Prototype and Change Approach Validation**	- Release management - Scope management - Business Case Refinement	- Unfreeze (Lewin 1951)	**- Implement Change**	
	- Technical System Design	- Risk management - Issues management - Dependency management - Monitoring and control - Quality control - Facilities management			**- Managing the tranches**
	- Component Design				
	- Code/Script Development				
- Realisation - BAU risk workshops to identify concerns and mitigation strategies for transitioning - BAU roles and responsibilities - BAU processes	**- Development**	- BAU SLAs, OLAs review - Handover and Transition Planning: - Roles and responsibilities matrix - Support processes with feedback loops - FAQs - BAU Risks - BAU Competencies			
	- Code/Script Validation				
	- Unit/ Component Testing				

IT-Enabling Change Lifecycle used in this study	System Development Lifecycle used in this research	Programme Management Lifecycle used in this study	Change Models (D'Ortenzio, 2012)	PMI Programme Management	OGC Programme Management
	- System Testing				
- Familiarisation - Stakeholder familiarisation sessions with the information solution where business leaders lead demonstrations to their business units (supported by the programme team) - Communications	- SME Functional Assurance				
	- Integration Testing				
- Early Adoption - UAT training - Communications	**- User Acceptance Testing**		- Implement the Change (Anderson and Anderson 2001 - Moving (Changing) (Lewin 1951) - Create short term wins (Kotter 1996)	**- Implement Change**	**- Delivering the capability**
	- Operational Validation	- Go Live implementation review - Programme closure		**- Programme Closure;** closeout **- Benefits Sustainment** Sustain change	**- Closing a Programme;** end of tranche review
- Training management - Training of users - Communications	- Transitioning	- Transition - Business clarity of Roles and responsibilities - Functional Support processes with feedback loops - Further FAQs - BAU Risk Management - Increasing BAU	- Celebrate and Integrate the new state (Anderson and Anderson 2001) - Don't let up (Kotter 1996)	**- Programme Closure;** transition **- Implement Change;** Manage Transition	**- Realising the Benefits**

IT-Enabling Change Lifecycle used in this study	System Development Lifecycle used in this research	Programme Management Lifecycle used in this study	Change Models (D'Ortenzio, 2012)	PMI Programme Management	OGC Programme Management
		Competencies			
- Early Majority Adoption - Embedding the changes - Learning by doing and teaching others - Support and discussion forums, coaching, mentoring, rotation of power users in support - Action Learning - Feedback loops - Rewards and recognition	- Business Outcome/ Business Capability	Post Implementation Review	- Learn and course correct (Anderson and Anderson 2001 - Refreezing (Lewin 1951) - Make change stick (Kotter 1996)	**- Benefits Sustainment** - Sustain change - Sense-making	
	- Next Generation/ Release	- Review of Release 2 Requirements		- Benefits Sustainment	

Table 4.2 Stakeholder Partnership V Model: Program, ICT and Change Lifecycles

4.4 Critical Success Factor Team Resiliency Supporting Model

The delivery of IT-Enabling Change requires a strong and resilient team as well as a strong and resilient programme leader. The team resiliency supporting model was complete in its development in 2011 during the delivery of a transformational change programme and is illustrated in Figure 4.4, page 67. The development of this model drew on years of experience of building programme teams that were seen to be resilient and adaptive during change. The philosophy of the model is that strategic change drives behaviour, which in turn drives organisational culture that then drives organisational behaviour. As stated by Pauchant and Mitroff (1988 p. 54), "culture is to an organisation what personality is to an individual". Uwadia and Mitroff's (1991) research also noted the aggregate of people, activities, behaviour, and information structures as an organisational mind and showed that there was a pattern that connects the individual mind to the organizational mind. As such, a checkpoint with Kubler Ross' (1973) grief cycle was included in the model.

As an example, in a start-up organisation, the behaviour and leadership of the entrepreneur drives the identity of the organisation, its values, shape and structure. As more resources join the organisation, they begin to mirror the behaviour of the entrepreneur. Through the delivery of organisational outcomes, the behaviour begins to form the deep set values and beliefs that then form the organisational culture within the organisation. As the culture weaves its way through the various information channels through the organisation, the organisational culture in turn begins to drive behaviour. The type of leadership changes throughout this journey and as the organisation grows. Building a resilient team and the cultural change in this Action Research followed this model.

The programme focused on building the team capabilities shown on the right hand side of the model, beginning from 'Purposeful Repositioning…' and working upwards. These steps have been found to counter the behaviours exhibited on the left hand side of the model, that start with a loss, which turns into stress and anxiety and continues downwards. There are several activities that form each step. The model can also be used to stop a downward spiral in behaviours. For example, in this Action Research, the business group who owned the process were stressed and anxious about how the automated workflow would affect their central role. To counter this the programme ran several risk management workshops to identify the risks, develop mitigation activities and contingencies. This alleviated their stress and anxiety and the group then focused on the next iteration of the automated workflows.

The team resiliency model includes the governance and sponsorship organisational structure, which is complementary to the critical success factor of Executive Sponsorship. This model was not

changed at all during the Action Research. This model focuses on the development of team resiliency. Separate literature has been available on building resiliency for the individual over the past several years in the field of positive psychology, (Selligman, 2011).

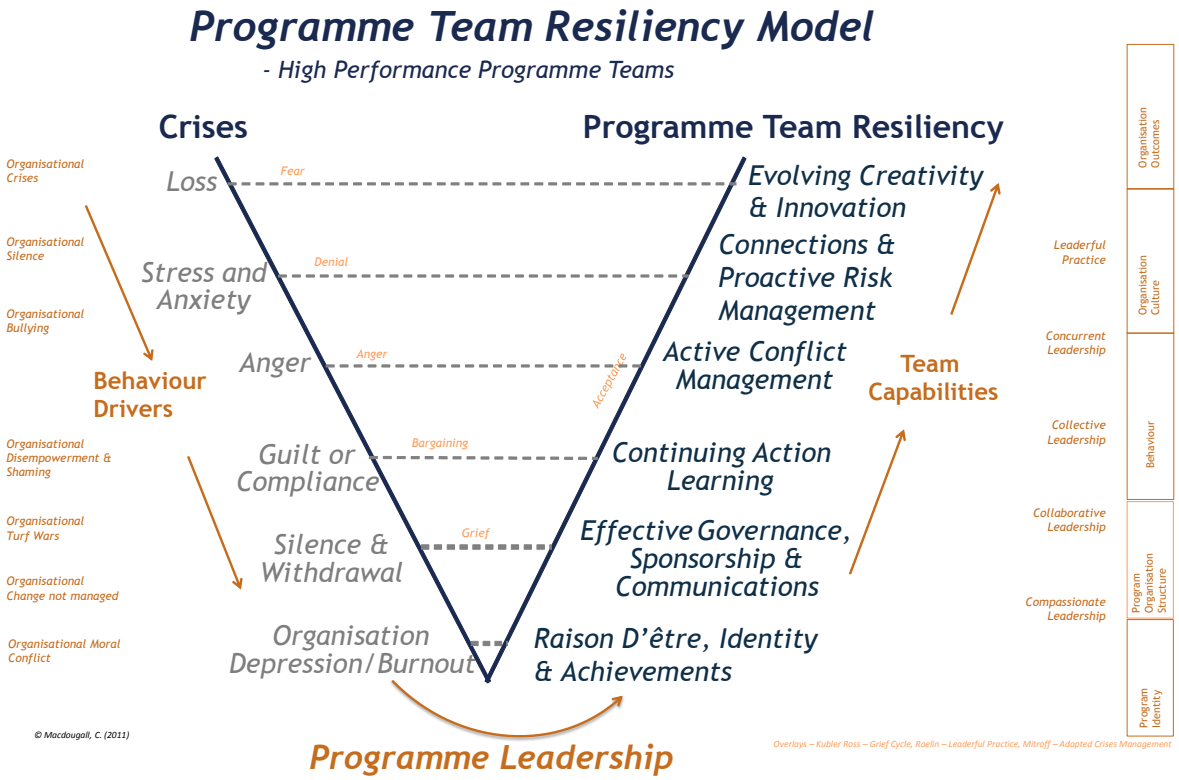


Figure 4.5 Programme Team Resiliency Model

4.5 Conclusion

The Strategic IT-Enabling Change Programme model formed the basis of the activities in the IT-Enabling Cultural Change Programme for one State Government Department in the Action Research. Thin slices of it were used by two State Government Departments as part of the fourth action cycle.

The critical success factors were indeed critical success factors for all the programmes. The steps of the supporting models were identifiable and positive feedback was received. Team members expressed a desire to understand the models further so that they could go on in their careers and use the models themselves in their own programmes and projects.

5. Action Research

The Action Research documented in this paper, commenced in July 2013. The study was of an IT-Enabling Cultural Change within a State Government Department in Australia. The study was a central agency, who had become entrenched in their use of paper over the past 20 years. Some staff had remained in the same desk for this period of time. The amount of hardcopy paper that had accumulated in the office environment was considerable. Further, the organisation was moving locations and moving to an 'agile' environment. In the new environment each staff member would be allocated a locker and would need to check in to obtain a desk for the work day. Therefore there was a clean desk policy that accompanied the new location. The culture of the organisation was reliant on paper to respond to Ministerial correspondence and provide Ministerial advice on state matters. The time for this advice could range from 24 hours to 3 months. In addition, staff could receive phone calls regarding previous advice and be expected to respond instantly, thus increasing the reliance on paper. The cultural change was to move the organisation to utilise electronic material more extensively and become less reliant on paper.

Within the IT-Enabling Cultural Change Programme, there were four projects that came together to form the outcome of cultural change for the organisation. The projects naturally formed into three Action Cycles, representing the Go Live events of the three releases with the separate outputs of the systems implementation.

The fourth Action Cycle evaluated 'Thin slices' of the models for further evaluation in additional State Government Departments. This Action Cycle was initiated in February 2014 and concluded in March 2015, spanning 13 months. To help understand the interdependent and overlapping cycles, I have visually presented the cycles and the outputs of each cycle in Figure 5.1, page 76, and further detailed the cycles in Table 5.3.

The timeframes for Action Cycle 1 spanned 10 months, Action Cycle 2 spanned 8 months, while Action Cycle 3 spanned only 3 months. Action Cycle 4 spanned the total timeframe of 13 months. As each cycle was overlapping, the review and update of the models is shown in Figure 5.2, page 76, according to timeframe rather than cycle.

The Action Learning Sets ran in parallel to the Action Research Cycles and involved several members within Victorian Government Departments.

During these Action Research Cycles and at the conclusion of both the Action Research Cycles and the Action Learning Sets, the model was reviewed and refined. The action taken and the timing of the model updates can be seen in Figure 5.1, page 76.

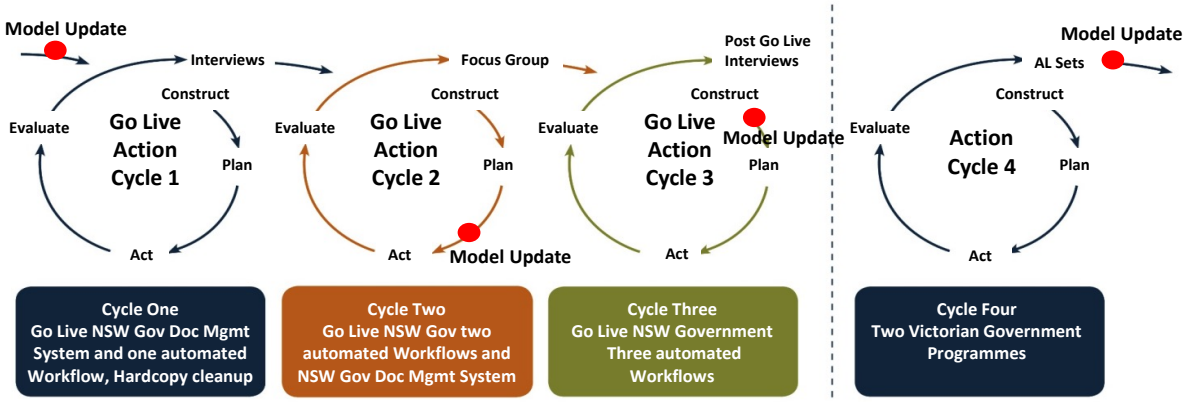


Figure 5.1 Action Research Cycles – Linear Display

The Action Research Cycles are chronologically shown in Figure 5.2, page 76. This illustrates that there were multiple streams of work occurring in parallel. Stakeholder involvement across these streams of work is critical, adding to the complexity of IT-Enabling Change.

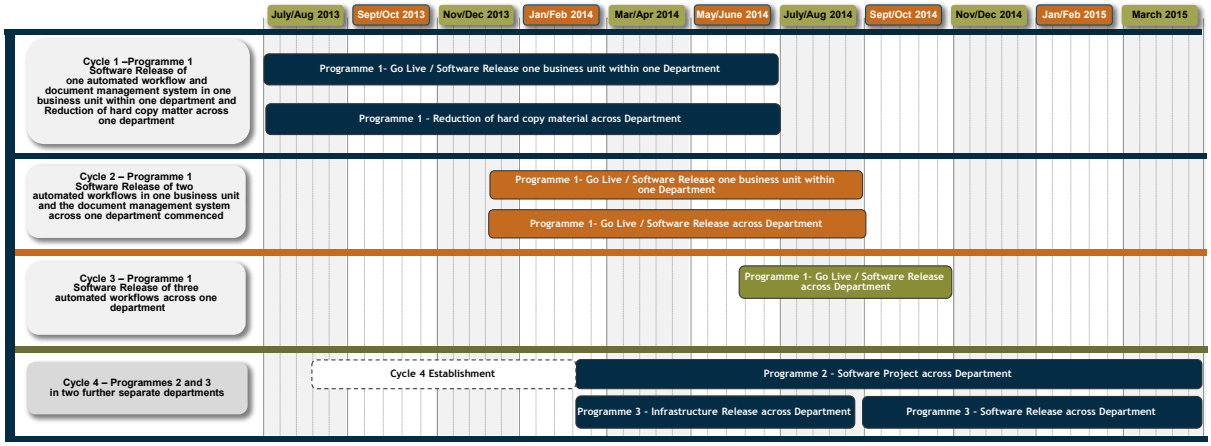


Figure 5.2 Action Research Cycles – Chronological Display

The following sections detail each of the four Action Research Cycles, the phases of the cycles, the additional literature reviewed and the changes made to the model and actions. The sections 5.1, 5.2 and 5.3 and 5.4 include the Intentions, Planning, Actions and Results and Evaluation, Emerging Themes and Future Research for each of four Action Cycles. These sections support the rationale for the refinements to the model and supporting models.

These sections are followed with a summary of these action cycles in Table 5.3, page 143, noting the CSFs, phases and components navigated in the research, the research techniques, the additional literature related to that action cycle and the resultant CSF and supporting model refinements. Each section is a mixture of narrative, critical review, data analysis and evaluation.

5.1 Action Cycle 1 Results State Government Department

5.1.1 Intentions

The purpose of Action Cycle 1, was to evaluate the models and actions, during the first go-live cycle at a State Government Department in Australia.

The change programme of this cycle included an IT-Enabling Cultural Change for a pilot business group for the department. The pilot included the deployment of one automated core workflow, a document management system and document migration for the nominated business group.

The purpose of the IT-Enabling Change Programme was to move a State Government Department toward electronic approvals and management of information and away from hardcopy material. The automation of core processes was to streamline the processes, scan and route tasks electronically, thereby reducing the administration time and maximising the response time. This would enable the business to be proactive rather than reactive and provide a greater amount of system information for reporting purposes.

The Australian State Government Department had firm trust in, and reliance on, hard copy material. The hard copy material was point in time but was kept as reference material to respond efficiently to the Ministerial requests and communications. There was hard copy material of 1500 metres to review and address. The behaviour relating to the retention of hard copy material was entrenched in the organisational culture, as the speed of creation and retrieval access of information was perceived to be linked to productivity.

Thus the challenge! To move an organisation that was heavily entrenched in paper processes and that had been in the same location for 20 years, to using electronic documents and workflows within a new agile work environment. In addition, the change needed disparate groups working together to make this change happen.

5.1.2 Planning

The State Government Department is a key central agency that advises the State and Government on key economic conditions and issues. At the point in time of the Action Research, the Department had 10 entities in its portfolio with one entity being moved to another Department. Machinery of Government departmental changes are common so a government portfolio is not static. Further, the Department itself had recently restructured into six divisions.

The business cycle fundamentally revolved round three major activities and involved the six divisions to varying degrees at points in time over a 12 month period. The programme approach was constructed to take advantage of the specific time periods in between the business cycle activities.

This cultural IT-Enabling Change Programme drew on several methodologies and disciplines:

- Records and Document Management – Designing and Implementing Recordkeeping Systems (DIRKS)
- Information Asset Management (IAM)
- Change Management – Prosci, ADKAR
- Project and Programme Management – Managing Successful Programmes (MSP)
- IT Systems Integration and Implementation – System Development Lifecycle (SDLC)
- IT Data migration
- NSW State Records Act

Further I needed to have knowledge of business to understand the organisation. As the programme director, the team and I also needed to gain an understanding of the IT system that we were implementing.

The pilot group was a business group that had been separated and transferred from another agency. The pilot business group had been moved several times over the past few years and its documents were in a different information management system and in a previous location. Its records needed to be brought to the Department, aggregated and migrated to the new system. Therefore data migration was needed for this business group.

The physical geographical location of the pilot business group was separate to the rest of the Department. This increased the physical turnaround times for the movement of physical papers between the Department, the business group and the Minister. Further, there was a different Minister for this business group in a different geographical location, to the Minister for the Department.

The successful implementation of this pilot needed to have operational validation by this business division, prior to the deployment of the system and further workflows in this division and other business divisions of the wider department.

All these aspects needed to brought together to plan the programme.

5.1.3 Actions

Many actions have been captured in this section, as there are minimal methods and models that provide guidance for transferability and repeatability.

5.1.3.1 Executive Sponsorship and Governance

The draft governance organisation structure for the programme was created and agreed by the day-to-day sponsor, but required endorsement from the Senior Responsible Officer (SRO), as defined in MSP (2011), or Programme Sponsor, as defined by PMI (2013). This proved to be a difficult period in the programme, as the role of SRO/Programme Sponsor for the business case had been an executive who headed the corporate business group, but who was no longer with the department. With this knowledge, buy-in was sought from the new head of corporate services to be the SRO/Programme Sponsor for this programme. With this agreement in place, names were suggested for the Programme Board. A week after this agreement had been gained, I was informed that the Executive Sponsor had assigned the role of Senior Responsible Officer (SRO)/Programme Sponsor to an alternative executive in a different business group. Buy-in was sought and gained from the newly appointed executive as SRO/Programme Sponsor and the governance structure revised. This executive became the Programme Executive Sponsor for the programme.

Although the governance organisation structure was owned by the Programme Executive Sponsor, endorsement was sought by the executive leadership team to gain their buy-in and support.

The endorsement by the executive leadership team was a defining moment for me and the programme. In presenting the programme organisation structure to the executive leadership team, the Executive Sponsor asked “what are you looking for from this programme board, Governance or change champions?” I needed both and could not understand why the delineation. In all my experience I had always combined the responsibilities for governance and sponsorship and had one programme board. To delineate between these two roles meant that I needed to conduct further research and analysis.

While I was conducting further research, the head of corporate merged this programme with several other technology and facility projects to form a mega-programme. The purpose of this was to provide one governance organisation structure for all the projects and programmes that were going to affect the cultural change for the organisation. However, the members of this governance structure were only from the corporate business group. As my change programme was going to need business sponsorship for its adoption, I was concerned that this governance structure was going to be able to provide the leadership and support required for the business change programme.

With the support from the day-to-day sponsor for my programme, we expressed to the Programme Executive Sponsor the risks to adoption of this structure. We proposed that we form a separate Sponsorship Group that included the business owner, the system owner, and the business group leaders of those areas that were going to be most impacted. This proposal was that the Programme Executive Sponsor chair the Sponsorship Group and have membership in the mega-programme's Steering Committee/Programme Board.

The changes in executive appointments and formation of the Sponsorship Group caused political tensions within the organisation. However, the Sponsorship Group provided enabling leadership and protected the programme from these political tensions so that the programme could focus on the business outcome. The programme provided full transparency to rebuild trust.

The members for the Sponsorship Group for my programme were agreed by each of the heads of the business groups and were subsequently recruited. Terms of Reference for the Sponsorship Group were drafted. The Sponsorship Group agreed the following responsibilities for the IT-Enabling Change;

- Champion the programme and implementation of new capabilities
- Ensure the interfaces with stakeholders were effective
- Ensure commitment to delivery
- Enable and facilitate the delivery of change
- Inform the programme of the direction and other key programmes in the business
- Ensure alignment of programme to strategic operations
- Guide the strategic and implementation aspects of the programme
- Represent areas significantly impacted by change and the interests of the business
- Establish the values and behaviours required by the change effort
- Encourage staff motivation, promotion of team-working, and empowerment at all levels
- Inform the programme of strategic risks and issues relating to the business
- Ensure recognition of appropriate risk taking
- Assurance of quality outcomes and that the deliverables were fit for purpose
- Ensure progress against strategic objectives
- Approval of change requests driven by business
- Promote and support the changes introduced by the change
- Provide endorsement at executive communications events
- Ensure achievement of objectives and realisation of outcomes

Meetings were held weekly with the business and technology owners, fortnightly with the day-to-day sponsor and the Executive Sponsor and monthly with the Sponsorship Group. Out of session communications were also common to ensure that all members were aware of what was happening in the programme at any point in time and could protect and provide political support for the programme.

The Sponsorship Group meetings were scheduled where possible, to coincide with the milestones of the programme, so that decisions could be made in a time efficient manner. The Sponsorship Group reviewed and endorsed the stakeholder advisory groups, their roles and nominations, the streams and timing of the programme, and the measures and incentives. Organisational policies, terms and definitions and business rules were also agreed by this group to ensure that they were aligned to the business.

The Programme Executive Sponsor provided the programme and the Sponsorship Group with an outline of the business cycles, highlighting the timeframes where the business would not be available. The timings of the programme activities were constantly watched to ensure alignment with business operations and commitment to schedule. The Sponsorship Group agreed the change to bring forward the automation of workflows and the resourcing and schedule impacts of this decision.

Product familiarisation sessions were held for the Sponsorship Group to enhance understanding of the discussions and the outcome sought. Following the familiarisation sessions of the product, the Sponsorship Group was in a position to foster the innovation and guide the emergent workflow automation of core business processes and practices. The group also provided guidance regarding the organisation security required for the system, to move the organisation from silos to the collaborative culture required. These activities also enabled the Sponsorship Group to provide quality assurance of the system, workflows and deliverables and go-live decisions.

The Sponsorship Group were actively involved in quality assurance of the training material, that included an online concepts tutorial, a workflow online tutorial, electronic handbooks and face to face training material as this material had all been tailored for the organisation. The Programme Executive Sponsor was also actively involved in the presentations of the monthly individual awards and the quarterly incentive award.

The Sponsorship Group were active in organisational communications and stakeholder sessions and championed the change and built commitment to the change. Where there were hurdles or areas of resistance, members of this group worked with the group executive to clear the path forward for the

programme. The Sponsorship Group members facilitated invitations to the programme within staff meetings in their business groups, to provide staff with programme updates and system familiarisation to prepare staff for the change. The members were advocates for the programme in all their daily work circles. The all staff go live meeting for the pilot, was conducted by key members of the Sponsorship Group and Stakeholder Advisory Groups, and supported by the programme team.

The Sponsorship Group and the Executive for the group conducting the pilot, were the approvers for the pilot go live. The business readiness and go live decision was supported by formal communication, documentation and supporting artefacts, and known risks and issues. During the immediate period following the go live and the subsequent business validation period, the Sponsorship Group members actively communicated with staff to integrate the system. This involvement put the Sponsorship Group in a strong position to formally sign off business validation for this Action Cycle.

5.1.3.2 Stakeholder Partnership

The following sections outline how we involved the stakeholders in the many aspects of the programme during this go-live, Action Cycle. The significant involvement of the stakeholders in this journey built a strong partnership between the programme and the stakeholders. The journey had multiple components, both electronic with multiple releases and hard copy.

5.1.3.2.1 Contextualisation; Context of Operations

The first action taken by the programme was to ascertain the context of the organisation and the programme through a situational and business analysis. This meant ascertaining the culture, the internal and external stakeholders, the systems, the business functions, the business cycles, the organisation structure, the information flows, the organisational politics, the core business processes, the dependencies, the roles and responsibilities, the competencies and capabilities of the stakeholders and the programme team.

From these activities, we determined the real business problems that needed to be addressed, their impacts, the solution and design principles, and ensured that they were well-defined. We found there was a low awareness of recordkeeping and government compliance requirements throughout the organisation, leading to duplication and multiple files and documents and reliance on personal networks to find files and documents. These activities were supported by technology, supportive only of hard copy. This led to practices such as email being used as a filing and document management system, lack of information collaboration and a massive amount of paper being kept.

Much of this information was captured and communicated through the use of slide packs and validated with the sponsor and executive.

5.1.3.2.2 Cultural and Technology Alignment

As the organisation required a cultural change, it was imperative that a cultural technology alignment be conducted. The task was to ascertain the culture and mode of operating that the organisation wanted to move to, the systems to support this and the capabilities required for the future operations.

The organisation wanted to move away from its silo within silos structures, to a more collaborative and mobile working style. Members from the Executive Directors and Directors Stakeholder Advisory Groups were involved in this task. Using Hofstede's (1983) cultural dimensions as a basis, the future collaborative working style desired was explored. The dimensions included individualism, power distance and uncertainty avoidance. It was determined that the organisation needed to be supported by an application with a web like look and feel and that included social media.

A review of the selected IT system and interfaces to other applications as well as the current system was conducted. The selected IT system, which was the enhanced version of the current system, had an additional web and social media module. The programme negotiated the inclusion of the web based module to provide the social support that was going to be needed for the change.

In parallel with the system implementation and IT-enablement stream, a project was initiated to address the review and clean-up of the hard copy material in the business. Multiple communications of the programme and its activities took place during this period and through multiple channels such as staff meetings, the organisation newsletter, targeted information sessions, emails, and organisational quarterly meetings. Competitions commenced per business division for hard copy and soft copy migration of files and per individual on a monthly basis. The programme team members worked with each of the business groups to assist them to address the amount of hard copy material. This was the first step of the cultural change.

5.1.3.2.3 Conceptualisation; Stakeholder Analysis and Concept of Operations

After ascertaining the broader internal and external stakeholders and organisational context, it was necessary to identify stakeholders to be involved in and contribute to the change programme. It was also necessary to be aware of other programme and project stakeholder commitments, for example, another technology project began to use the administration staff as its project champions.

Given that the programme had a pilot for softcopy as well as a hardcopy clean-up occurring in parallel, I was cognisant of the multiple demands being placed on the organisation by my programme as well as other projects. Further I had different aspects that I needed in contrast to other projects. The immediate stakeholders such as the three suppliers, corporate communications and the Sponsorship Group were easily identifiable. The stakeholders throughout the organisation were not as easily identifiable. I sought further guidance in the literature for stakeholder identification.

On reflection, as an alternative, I embarked on the creation of group organisational positions, crafting the roles for the different aspects. This enabled me to have clarity about the contributions sought. It also enabled me to be clear in my communications to the stakeholders about the purpose and contributions that I required from each stakeholder group for the change. I determined that there were five different stakeholder groups that were required, including:

- Executive Directors and Directors; to provide high level information requirements for the future processes and requirements for future security of information
- Managers; to validate the current processes and design the future processes and decision points
- Officers and Analysts; to provide detailed information requirements for the system
- Administrators; to provide input as to the current and future administration practices, and detailed information and system requirements
- Pilot Working Group; all of the above

I believed that 10-15 members per stakeholder group would provide a cross organisational view and that approximately four hours per month would be required per group. The administrators group had 20-25 nominees.

After having the crafted the roles, I then determined nominations of individuals for these groups; those who would be able to provide and contribute the information that was needed for the requirements, design and assurance of the system. The individuals were informal leaders in their own areas, people that others turned to in their informal networks if there was a problem at hand

that required resolution. The nominated individuals were also more open to change and more likely to adopt new practices. The individuals nominated were across the business groups. The nominations were then reviewed with the day-to-day sponsor, followed by the Programme Executive Sponsor. Endorsement was then sought with each of the group executives. Following the endorsement, communications to each of the members in these stakeholder groups took place.

Having now an understanding of the organisational context, the culture, the technology and the stakeholders, we crafted a draft Concept of Operations in a diagrammatic format. This was to inform the users of the proposed system from their viewpoint.

The stakeholder approach for the programme was created for the different streams of work. The approach for the IT-Enabling Change was to utilise the Stakeholder Advisory Groups at the various points of intersection in the lifecycle system development. The stakeholder approach for the hardcopy clear-out stream was not dependent on the Stakeholder Advisory Groups, but based on business groups and floor location. Both approaches were endorsed by the Sponsorship Group and then the business group Executive.

Following the endorsement by the Executive, the Stakeholder Advisory Groups were established, and the membership critically reviewed prior to each activity. There were some sessions that required stakeholders from a business group rather than the cross functional groups. This was easy to do with the groups that had been created. In addition, the members of each group were monitored due to organisational movement and interdepartmental movement of personnel.

For the hardcopy clear-out, we worked with Corporate Communications and drafted A3 flyers of the groups and timings for the hardcopy clear-out and put multiple copies of these on every floor in the buildings involved. These flyers also included the competition that was measuring the amount of material that was cleaned up. These flyers were updated monthly and redistributed. The measurement update and the monthly individual competition winner was included monthly in the corporate message from the Executive Sponsor.

Working through Corporate Communications only, presented timing and content issues for the programme to fully inform and engage stakeholders of/in all the programme activities and provide the transparency required to build trust. Consequently, other mechanisms and avenues were used to convey clear communications, such as emails via the divisional heads, staff meetings, workshops and information sessions.

5.1.3.2.4 Business Requirements, Solution Design

The Stakeholder Advisory Group individual members were involved in the development of business requirements for the new system and in the information to construct the current process.

During this period it was ascertained that the business was heavily reliant on heavily linked spreadsheets, and that they were core to the business. This core requirement had not been identified prior to product selection preceding programme initiation. Discussion with the service providers resulted in this functionality being included in the next release of the application.

The non delivery of this functionality meant that workarounds were needed to be put in place. This had a significant impact to the achievement of the overall business outcome of a fully electronic environment.

Further it was established that the infrastructure provider would provide access to the application as part of a multi tenanted solution. This posed configuration restrictions due to previous tenant decisions. The system design therefore had to be cognisant of the limitations of the system and also the limitations of the multi-tenanted configuration.

The Business Requirements document, where all this information was captured, was then sent out to the Officers and Analysts and the Administration to review.

During this period, the current process was documented. To ratify that we had captured the process correctly, two sessions were held with the Stakeholder Advisory Groups of Officers and Analysts and the Administration. To design the future process, the business owner and I met with several of the Executive and Sponsorship Group to determine their problems with the current process. Sessions were then held with the programme team members to draft a future process. The current and future process drafts were then taken to the Stakeholder Advisory Group of the directors and managers to finalise the design of the future process for the first release and the 'wish lists' for further releases. Following these sessions, the draft future process was socialised with the Stakeholder Advisory Groups of Officers and Analysts and Administration.

Once we had agreement from our Stakeholder Advisory Groups and the Sponsorship Group, we then began to communicate the solution to all levels in the organisation. We laminated large A3 paper copies of the future processes and used them in every forum that we attended and facilitated. This gave staff a visual representation of the future process, who would be involved and when, what would stay the same as the current practices, what would be different and what would be new. Through these sessions, we started to gain momentum in the change and started to get the question

"how soon can we get this?" We then used this positive feedback in the corporate communications with the Executive Sponsor's update.

The detailed system design of the process was then constructed and circulated for review by the business and technology owners, the programme team, the suppliers and several 'tech savvy' stakeholders.

The robustness of the design for the system configuration and the automated workflows was due to the time taken to work with the stakeholders and the level of understanding imparted by the team to them. Conversely, we saw the business struggle with the functional classifications for their electronic folders. To cater for this we layered the structure of the folders to begin with the organisational structure and then a functional structure. The constructs were accepted by some groups and not others. Given the timeframes, it was determined that the refinements would be a support issue when staff began to use the system. Further consideration to this approach would be needed for the next go-live, Action Cycle.

5.1.3.2.5 Stakeholder Interdependencies Programme Schedule

A stakeholder interdependency schedule was used to manage the planning and scheduling of the programme and projects. This schedule was used to do product based top down planning, (Bryde 2007). This enabled the programme to manage timeframes and deliveries as it focused on the key items that were being contributed from multiple suppliers. The stakeholder interdependency schedule used was complementary to the task oriented Gantt schedules. The schedule was used for planning and scheduling as there were multiple stakeholder groups involved in the design and development of the system. Stakeholders included three technology service providers as well as the programme team and business contributing components to the programme.

The Stakeholder Interdependency Schedule summarised critical project information into a single, concise, diagrammatic view. It provided a snapshot view of the interdependencies over the programme lifecycle. It provided critical information for all project stakeholders including business, non-technical and technical stakeholders to be aware of. It provided an excellent method to communicate the interdependencies of the components to be provided by each stakeholder. Each supplier knew exactly what was expected from them and when, which enabled them to carry out their responsibilities and commitments.

The schedule enabled the Sponsorship Group and the Stakeholder Advisory Groups and key stakeholders, to see what was happening in the programme, who was contributing, what components were being contributed and when, and to which milestone. Slippages and delays from

suppliers and shifts in the major activities were shown. Understanding the slippages and delays, we could easily determine the impacts to stakeholder events and reschedule these accordingly. We were also watchful as to whether business unit deployment needed to be changed in alignment with the business cycle. It enabled the programme team and the Sponsorship Group to monitor the health of the programme.

The Stakeholder Interdependency Schedule was heavily used by the whole programme team to display the key items and the interdependencies within the programme. The team included all the stakeholders who were contributing components for the system development. As we could see the key items for the IT-Enabling Change we could mitigate the risks to delivery.

5.1.3.2.6 Socialisation; workflow prototype, approach validation and development

The socialisation of the prototype of the workflow required several sessions with the different Stakeholder Advisory Groups. These sessions required critical facilitation skills, to manage stakeholder expectations as to what would or would not be included in the workflow to stay within the cost and timeframes budgeted. These sessions enabled the programme to go into a release approach. The entire list included what could be modified or included on go-live, as well as what would need to go into another release. The list of items captured from the initial session with each group was provided to each Stakeholder Advisory Group in the Familiarisation session (please refer to 8.) so that the stakeholders could see what had been addressed from the Socialisation session and what formed the basis of the next release and next generation (please refer to 11.). Questions asked in these sessions fed into the creation of the Frequently Asked Questions (FAQs) and into the development of the training guide for the workflow.

5.1.3.2.7 Realisation; business preparation

Involving stakeholders in preparing the business for the go live of the system was paramount. However in addition, there were two business areas accountable for the ongoing management; one for the workflows and the other for information management and the system. These stakeholders also needed to prepare for the go-live and transition to the new system and practices. Without these areas being prepared, the new system and practices would not be able to be supported.

These business areas came together to work through the roles and responsibilities of all parties, and the processes for the future operating model and the competencies that would be required. This was to ensure that there would not be any gaps in the processes and that the feedback loops would be in place for timely customer service post go-live of the system.

From these sessions, flyers, in the form of A5 stickers, were created for the workflows. The flyers would provide easy information for the users as to whom to contact when they had an issue and could be affixed to a writing folder or locker in the new hot desk environment.

However, it was at this juncture that the State Premier resigned, causing a reshuffle of Ministerial responsibilities. The area that was to be the pilot and go live became in jeopardy of being moved to yet another Department. Contingency plans were crafted and after several days, it was determined that the area was remaining with the organization. The programme proceeded as planned.

5.1.3.2.8 Familiarisation; Subject Matter Expertise (SME) Functional Assurance

Familiarisation sessions of the workflow were held with the Stakeholder Advisory Group members and the Executive team. These sessions were intended to get the business leaders familiar with the workflow, so that they would be able to encourage and support the users in their areas. Familiarisation sessions of the Information Management Structure and security were held within each branch, as these were specific areas that required feedback for finalisation.

Key members of the Stakeholder Advisory Groups were instrumental in functional assurance testing of the workflows, usability and information of the system. Functional assurance testing was to minimise any functional risks prior to User Acceptance Testing (UAT), due to the high profile of the automated workflows and the time criticality of responses to the Minister. This concept is a new paradigm in the world of IT system testing, and was leveraged from previous experience in health, where it was key to have the clinicians conduct clinical functional assurance prior to users, to ensure that the system did not have any clinical functional risks, Pearce, Macdougall, Bainbridge, Davidson (2013).

The functional assurance testing was designed to test the release prior to release. There were assurance scenarios created to test the workflow that focused on the usability and logic of the workflows. Preceding UAT with functional testing enabled the users to have a better experience and increased the likelihood of adoption.

5.1.3.2.9 Early Adoption; Training, Testing, Go Live Celebration

Training for the workflows was tailored to the Department, whereas standard training modules for the system from the service provider, were leveraged.

There was a multi prong approach taken for training, face to face, online material and you tube videos. System training was conducted in face to face traditional training sessions. This training was

preceded by an e-concepts online tutorial to familiarise users with navigation and terminology. The face to face training was supported by online tutorials for the workflows.

Frequently Asked Questions (FAQs) had been created during the change journey from all the workshops held with the Stakeholder Advisory Groups. A full user guide for the workflows was also created. All of these were posted on the corporate intranet web page that was created by the ongoing support team specifically for the support of the application, workflow and function.

The various forms of testing for the system were conducted by the team. The Stakeholder Advisory Groups were involved in preliminary training and user acceptance testing (UAT) of the system and workflows. The UAT tested that the requirements of the system had been met by the system configuration. On conclusion of the UAT, a checkpoint review was conducted by the Sponsorship Group that everything was in place to go-live. Following signoff from the Executive of the group of the pilot, the decision was made by the Sponsorship Group and Programme Board to go live.

For the go live event, there were two stakeholders nominated by the Sponsorship Group members who were the pilot representatives. The Sponsorship Group members, the business owner and the nominated stakeholders undertook rapid training to enable them to lead the go live event, with support only from the programme team members and the system support team. It was only during this session that the business users of the pilot group informed us that they did not use this workflow very often, but used quite heavily the workflows that were still to come. This meant that the usage during the pilot would be low compared to our expectations. The programme team created a marketing pack for the go-live event, comprising pens, mouse pads and the flyers for the workflows, to distribute at the go live event. We also provided muffins and balloons. The pens, mouse pads, muffins and balloons were provided by service providers.

5.1.3.2.10 Operational Validation; Go Live Support

Support to all stakeholders in the pilot group, was provided by the programme team for the initial few days. Following this period, two of the programme team 'walked the floor' for the next few weeks to support the stakeholders.

Further assistance with the hard copy clean-up was also provided by these two team members during this period.

5.1.3.2.11 Next Generation

Changes were requested in the folder structures in the system. The support group in conjunction with the programme team responded to these requests rapidly with configuration changes.

Changes requested for the workflows were captured and fed into next release of this workflow and into the development of the next two workflows, which is discussed in Action Cycle 2.

5.1.3.3 Team Resiliency

5.1.3.3.1 Programme Identity and Positioning

The programme team created a name for the programme at the outset. This name was one that could be shortened for the new business area responsible for the transition, ongoing management and embedding of the system. The name of the programme was maintained even when the programme became part of the mega-programme.

All communication included the objectives, a sense of the future and the reasons why we were embarking on the programme. This began to build a sense of purpose and belief in the programme. The team built and agreed the values that it wanted to operate by. Team seating positions were carefully considered so that the team had feedback loops and reinforcements of behaviours. Slowly the messages, loyalty and empathy for others began to build a positive and energetic force.

5.1.3.3.2 Governance and Sponsorship and Communications

The governance organisational structure was created, including the Sponsorship group and Stakeholder Advisory groups. The programme team was formed, with each member having a position description and a clear understanding of their role and responsibilities. There were a few part time members on the team and some with restricted hours. These aspects were respected and the overall programme team resourced to cater for them. Information flows between the programme team members and between members and stakeholders were well-thought-out so that the communication protocols for the programme team could be agreed.

Programme timelines were created with the programme team members, so that the members could contribute and make decisions, and I could gain their commitment for programme delivery.

Any negative behaviour of team members was corralled quickly by other team members, before it impacted others in the programme and the business. There were several occasions where this was escalated and the appropriate actions taken.

Daily and weekly meetings commenced to provide transparent, open and consistent information. Each team member participated in these formal meetings and minutes were kept. The minutes enabled follow through of action items and programme issues. Through these meetings the team began to build a sense of trust and community within the team, with a willingness to share information with each other. The group began to take greater pride in their outputs and open to further feedback. Rework was reduced. Team members began to sponsor each other and there was reliability and a connectedness of the team.

5.1.3.3.3 Action Learning

The team also had informal weekly coffee meetings. Everyone was invited but attendance was not mandatory. Typically, the team members from the service providers did not attend. The purpose of these meetings was to be an action learning set. It provided a forum where the team members could reflect on the problems and issues that they were encountering and gain feedback from other team members. This enabled the team member to think more critically of the situation and make sense of what they were encountering. War stories were told, questions were asked, and assumptions challenged. Achievements, both positive and negative were informally recognised. This provided the team members with equity of voice, a safe environment within which to learn and grow. Team members who did not attend maintained negativity, which then had to be addressed by active conflict management.

5.1.3.3.4 Active Conflict Management

During any change programme, there is conflict. To change something, demands additional time and learning, which is burdensome when the person already believes they are overloaded. The change needs to exhibit how it will make future operating easier for that person.

This was particularly prevalent throughout the hard copy clean-up as the future state of operating was not trusted or familiar as yet. Resistance to change was experienced by several of the team members. Team coaching took place informally via the action learning forum.

When any negative feedback was received about the programme and its associated elements, timely meetings would be scheduled and feedback gained from the source of the feedback. Actions taken were communicated to the feedback source and to the Day-to-day Sponsor. There were several occasions where this feedback was also communicated to the Programme Executive Sponsor. Addressing feedback such as this, had not been estimated in the project delivery schedule. However, the timely responses kept project delays at a minimum.

There were also several factions that kept forming in the programme team. To contain the negative behaviours, the seating of the programme team was reviewed and recast to form more positive communications, better collaboration and inclusivity of the team. In addition, active conflict management was conducted with several members. Unfortunately, as a result, two of the team moved on to other opportunities.

5.1.3.3.5 Risk Management

The programme continually identified new risks as well as monitored previously identified risks, their mitigations and contingencies. The programme risks were initially communicated mainly upwardly rather than to the programme team. Over time as the team became more connected and stronger, the risks and their mitigations began to be discussed and reported more openly. Prior to go-live, anticipation and tensions were higher and risk identification more frequent.

5.1.3.3.6 Evolution; Innovation and Creativity

The team was continually monitoring the supplier contributions, the stakeholder activities and the business cycle. The programme saw that a greater gain to stakeholders would be made by the automation of the key workflows. As a result, this development was brought forward and the timelines of other activities pushed back to accommodate this. Flexibility within the programme was key to meet the business outcome.

Where the system was constrained in design, by either the application itself or the across government configuration, the team, stakeholders and Sponsorship Group had to think creatively and innovatively. This creative thinking often meant that the solution evolved. Care was needed regarding the implications to programme resourcing. Communication of the evolvement was key to all the stakeholders involved so that they could continue to walk the same journey.

5.1.4 Results and Evaluation Action Cycle 1

Feedback for this Go-Live and Action Cycle was sought through semi-structured interviews with seventeen stakeholders involved in the programme. In addition fourteen stakeholders had been included in an independent operational readiness review, the results of which have been incorporated here.

All stakeholders believed that the programme had been successful to this date. The pilot area was thought to be a realistic well bounded and defined group, well prepared and well managed.

The programme did what it was supposed to be doing and exhibited the critical success factors and supporting models. There was surprise expressed that the programme had got to this point so quickly, and it set the expectations and the credibility of the programme.

The top four critical success factors determined by participants following this action cycle, and resultant analysis and coding, were:

- Stakeholder Partnership
- Team Resiliency
- Sponsorship Group
- Programme Leadership

The participant's responses are shown in Figure 5.3, page 95, which clearly illustrates the criticality of the four people related success factors.

Figure 5.3 Action Cycle 1 Critical Success Factors

This go live cycle was believed to have been an iterative and collaborative process between all the stakeholders, the business and the technologists. This strongly connects with the literature reviewed on stakeholder involvement by Lewis, Romanaggi, Chapple (2010). It was seen to have had a greater level of engagement and far more consultation with the business than other programmes. There was structure in the process that provided stakeholders with more opportunity for input and feedback, particularly into the iterative design process. This process was aligned to the model and extends the phases outlined by Forsberg, Mooz, Cotterman (2005). The programme was responsive and flexible yet set and maintained stakeholder expectations during the programme. The socialisation and familiarisation sessions were observed to have provided valuable input to the programme. The socialisation sessions were believed to have been key to the quality and usability of the system and workflow. The familiarisation sessions were seen to have had more impact and uptake if they were run by the business for the business with real scenarios. Seeing colleagues endorse the new product and processes built confidence and ownership of the system. Stakeholders knew what was going on in their business and where the impacts were going to be. As found in the literature when the stakeholders work in partnership with the team they deliver the required outcome, (Crawford, Aitken and Hassner-Nahmias, 2014). Targeted communication and departmental tailored training, were also considered to have been very important aspects. Respondents believed that the stakeholder engagement approach contributed greatly to the success of the programme.

The programme built a good team with a clear identity, comprising internal and external resources. The team included resources from the business as usual operations support. There was strong teamwork, active participation and open communications that were transparent, frequent and bi-

directional. There was a good mix of resources and competencies, so that there was the ability to step in for each other if necessary to have the right people at the right time in the programme. This was enabled as there was continuity of resources with clear roles and responsibilities. The team felt that they were valued and supported, guided when needed and listened to when providing feedback. There was open thoughtful discussion. The quality of outputs continued to increase and rework to decrease. The team were knowledgeable yet approachable and were actively involved with the business. There was trust, ownership and commitment in the team. The team were hardworking and diligent. It was felt that there was greater inclusiveness in this programme team than others. The team did encounter setbacks and bumps in the journey, but was not derailed at any stage and bounced back from the adversity. Conflicts were not detrimental, problems were worked through and agreement gained for the path of resolution. There was a process of continuous inquiry and learning in the programme which enabled the team to be open, creative and innovative in their approach. The team were clearly focused on risk and proactive mitigation. These aspects are integral for Team Resiliency, and Resiliency thinking, as previously outlined in the literature.

The Sponsorship Group were seen to provide sponsorship and executive support to the programme. The Executive Sponsor made the Sponsorship Group responsible for the programme. The Sponsorship Group members were seen to have been prepared to engage, rather than having a positional position. Respondents believed the Sponsorship Group to be business focused and there to drive ideas, endorse the approach and deliverables, champion the programme and build business support. Whereas the Steering Committee was thought to monitor and keep the programme on track. It was believed by several respondents, that the people in the Sponsorship Group had made it a success factor. It was thought that the Sponsorship Group had the right members, with a good mix of experience and organisational representation and respect. Members engaged at the right levels and were advocates within the business through formal and informal networks and were also good sources of information from the business. The members were also early adopters who could embrace the change, value the outcome and gain through belonging to this group. The business owner for the automated workflows, and the owner for the system were part of the Sponsorship Group and they were extremely active in all of the change activities, for example the stakeholder familiarisation sessions. The Sponsorship Group provided an understanding of business strategy and alignment with operations. It set the guiding principles. The Sponsorship Group provided the forum that enabled robust discussion with degrees of difference, for the tough questions and challenging aspects of the programme. The Sponsorship Group enabled the programme at multiple levels, gained executive buy in across organisational boundaries and championed the programme. The

Sponsorship Group ensured the team and the stakeholders were supported across the Department. Respondents believed that the Sponsorship Group had aided in a greater level of adoption and ownership by the business and empowered the programme to be adaptive. The Sponsorship Group was considered a bit of an experiment, but one that was highly successful. It was believed that this programme would not have been successful without active sponsorship. It was proposed that the governance framework be the first decision in a programme. The effectiveness of this Sponsorship Group clearly aligns with the previous literature reviewed, that Executive Sponsorship is a critical success factor for delivery.

Programme leadership was thought to be integral to the success of the programme. Leadership was provided by both the Executive Sponsorship Group and the Programme Director. It was believed that the programme director provided adaptive leadership, with energy, authenticity and collaboration with all stakeholders. The respondents considered that there was a good structured approach used in the programme with control of lots of moving parts. Issues and concerns were addressed in a timely manner with follow through and professional integrity. The programme pursued its intended goals and clearly communicated the reason for doing the programme and the need for change. The programme maintained the interest of the team, the stakeholders and the Sponsorship Group. For example there were competitions with the individual of the month and group quarterly challenge. The change for the programme was led by the Programme Director in conjunction with the business owners and it was believed that this was a very important role in the team. The three types of leadership from complexity leadership theory were visible in this action cycle; adaptive leadership of the team, enabling leadership of the Sponsorship Group and the administrative leadership within the organisation (Uhl-Bien and Marion, 2007). The responses concluded that if the programme had only focused on time, cost and quality, that the programme would not have been successful or as successful as it was.

The change management was seen to have started, with the business starting to own the system. What became clear was the multiple interconnected elements that needed to combine to orchestrate success, supporting the consideration of IT-Enabling programmes as complex adaptive systems, (Benjamin and Levison, 1993).

Respondents believed that the use of these models had had a positive contribution to the programme. The change aspect was a particularly welcome addition to the IT 'V' model. These models were believed to provide the framework and tools to have the dialog to bring all the components together. It was believed that with training, these models would be repeatable in other change and IT-Enabling Change Programmes.

5.1.5 Emerging Themes Action Cycle 1

There were a number of areas where the literature was referred to during the Action Cycles for problem solving, as per the dual action research cycles in information systems proposed by McKay and Marshall (2001). Some of the aspects initially explored here are further explored from a research perspective in the Literature Review.

5.1.5.1 Sponsorship vs Governance

Programme Governance is achieved through a decision making body, that endorses or approves programme recommendations, PMI (2013). Sponsorship and Governance were seen by the Executive Sponsor in this study, as two separate functions; sponsorship to champion the change and governance for the management and performance of the programme.

The OGC (2011) outlined three tiers, the sponsoring group, the programme board and project boards. The sponsoring group nominates the Senior Responsible Officer (SRO). The programme board includes the SRO, programme manager and change manager, OGC (2011). The sponsoring group as defined by the OGC (2011) are responsible to champion the implementation of the new capabilities.

In this Action Research the sponsoring group would have been the Executive Leadership Team (ELT), and the Senior Responsible Officer and the Programme Executive Sponsor. However, in reality the organisational Executive Leadership Team in this research were detached and did not have the capacity to actively champion this programme separately and had aggregated it into a mega-programme. Hence a separate 'sponsorship group' was conceived and formed as outlined in the Action Research.

Although this was experimental and recognised by the executive as such, having a separate sponsorship group supported the critical success factor of Executive Sponsorship to a higher degree than just having a programme board. Therefore, the sponsorship group has been shown separately in the supporting model for Executive Sponsorship. As stated, the members of this group included those who had ownership of the programme, the system, the process and the business impacts. Terms of Reference can be found in Appendix B.

5.1.5.2 Cultural Technology Alignment

Hofstede (1983) identified that people from different nationalities think differently about their relationship with the organisation. The author found that this affects the approach needed for successful project management. Hofstede (1983) related to the cultural factors of individualism and collectivism, power distance, uncertainty avoidance, masculinity and femininity. The government

department and its partners in this Action Research, consisted of individuals from all nations. The Department also had its own culture that had been built over 20 years. These cultural aspects had to be taken into account as well as the culture desired for the future organisation.

Business information management and organisational culture was an area of interest at the International Congress of Archives, 2012, (Siller, 2012). However, Siller (2012) had used the dimensions of process vs results orientation, employee vs job culture, parochial vs professional, open vs closed systems, loose vs tight culture and normative vs pragmatic culture.

Kotter (1995) noted that one of the major causes for the failure of transformation efforts was not anchoring changes into the organisation's culture. Technology can provide an anchor, as it is used every day by every person in an organisation.

Although Kotter's (1995) and Siller's (2012) cultural aspects were taken into consideration, it was the Hofstede's (1985) cultural factors that enabled the programme to determine the 'fit' of the technology selected to the organisation culture. The fundamental component that was needed, was a different user interface that enabled users to store personal items and operate with a web like look and feel. This was sourced by the programme, however the implementation was later thwarted by the product trainers' biases, which later impacted adoption.

Due to the criticality of this activity, it has now been included in the Stakeholder Partnership supporting model.

5.1.5.3 Stakeholders; Identification of groups, involvement and communication

The identification of stakeholders for a cultural change in an organisation that was still in the process of restructuring, was a challenge. The term 'stakeholder' refers to anyone who has an interest or who may be affected by the change.

Allen, Kilvington, Horn (2002) identified the steps of conducting stakeholder analysis, with the first step being stakeholder identification. The author referred to individuals, groups, organisations, communities. The second step was to determine the interests, importance and influence of the stakeholders. OGC (2011) referred to categorisation of the groups, then analysing the stakeholder profiles by importance, power, influences, interests and attitudes. Programme communication as to whether written or face to face was determined by the influence and interest of the stakeholder, (OGC, 2011). More face to face communication was suggested for those stakeholders who were more interested and had more influence, (OGC, 2011). The PMI (2013) used a power, interest stakeholder map. Mitchell, Agle and Wood (2013) expanded these categories of stakeholder identification to include power, legitimacy and urgency.

These categories were useful for the stakeholder analysis, however the fundamental purpose of the stakeholder groups was to gain access to organisational informal knowledge and provide forums where this knowledge could be contributed constructively. Therefore the category that was needed in addition to these previously discussed, was contribution – which stakeholders would provide, being a valuable contribution to the requirements and design of the system and the workflows. The connection between the stakeholders and requirements was identified in the Project Management Body of Knowledge (PMBOK) (PMI, 2013). Jeffery (2009) very briefly touched on stakeholder contribution.

The literature could be extended in the area of stakeholder identification for IT-Enabling Change. Only with such stakeholder contribution would we be able to have a robust design, stakeholder engagement and early adoption.

5.1.5.4 Programme Leadership

Toor and Ofori (2008; p.64) stated that "the purpose of leadership is to bring about change" which is the basis of a programme, and cite Bass and Stogdill (1990) "leadership is the dynamic force that motivates an organisation to achieve its objectives". Toor and Ofori (2008) determined that technical management of projects needed to shift to authentic leadership to be successful.

However, Smith (2003) determined that only 19 % of culture change efforts were successful, whereas Higgs and Rowland (2005) assessment was marginally higher and asserted that up to 70% of change initiatives fail. Higgs and Rowland (2005) determined that one of the root causes of failure was problems with leadership behaviour. This is supportive of the results from the respondents from Action Cycle 1.

The research indicates that there are multiple levels of leadership required for programme success:

- Executive, top and senior management
    - Thite's (2000) research found that "All the senior managers agreed that leadership is one of the critical influencing factors in project implementation and its importance increases with the size and complexity of the project." Thite (2000) concluded that successful leadership required top management support. Muller and Turner (2010) determined that to deliver successful projects the key factors are a skilled project sponsor and project manager who provide leadership, give the projects an identity and keep the stakeholders and team on board and make difficult decisions.
- Programme
    - According to Pandya (2014; p. 39) "the project leader is the architect of project success" and that research has shown that project leadership is one of the most important factors for the success of an IT project. Thite (2000; p.236) found that the "abilities to manage

people, stress, emotions, bureaucracy and communication" were needed in addition to those developed in the IT industry.

- Stakeholder
    - Cleland (1995; p.85) in his review of leadership and the Project Management Body of Knowledge, (PMBOK) PMI (2013) stated that "a project's success or failure is the result of leadership of the project's stakeholders".

Uhl-Bien, Marion and McKelvey (2007) created complexity leadership theory (CLT) in complex adaptive systems (CAS) that has three types of leadership:

- Enabling
- Adaptive
- Administrative

Kaplan (1999) originally discussed forceful and enabling leadership and described 'enabling' as enabling people to innovate and perform at high levels, involving and influencing others and making decisions that affect the whole. Enabling leadership fosters the conditions for adaptive leadership of the programme and forms the bridge to the Administrative Leadership of the organisation, (Uhl-Bien, Marion and McKelvey, 2007). This type of leadership was exhibited by the Sponsorship Group.

Wasserman and Durishin (2014) cited a case study of adaptive leadership within a transformative strategic change in a health network with an uncertain future. The CEO provided adaptive leadership for this cultural change programme through the development of a common purpose, clear goals and priorities, trust, building organisational strengths, fostering an agile collaborative culture, and ownership of the mission, (Wasserman and Durishin, 2014). The CEO built what was termed a strategic framework that included elements of the Team Resiliency supporting model; including risk management, action learning and communication, through re-framing opportunities, expanding problem statements to explore possibilities, valuable storytelling and critical conversations, (Wasserman and Durishin, 2014). In this Action Research, adaptive leadership was provided by the Programme Director for the leadership of the programme team.

Administrative Leadership of the organisation is often what the stakeholders of a programme are conditioned to; for the planning, coordinating and organising of organisational tasks, (Uhl-Bien, Marion and McKelvey, 2007). Cleland (1995) found that the definition of leadership and differences in environments and roles was not clear in the literature, but identified four key issues that a project leader must be concerned with; vision and articulation of the vision, the resources who can assist realise the vision, the conceptualisation of the design and lastly the gaining of the commitment of stakeholders. These issues are all part of the Stakeholder Partnership supporting model. The Sponsorship Group and the programme need to work with the stakeholders to transition the new

capabilities into the organisation. The Sponsorship Group and the programme team need to work with operations to embed the new capabilities. This is translated to the enabling leadership forming the bridge between the adaptive and administrative leadership. This is vital for adoption.

5.1.6 Action Learning; Changes to Model

Following Action Cycle 1 and taking into account the new learnings that emanated from Action Cycle 1, changes were made to the Stakeholder Partnership supporting model.

Stakeholder Partnership 'V' Model

As this was an IT-Enabling Cultural Change Programme, there was considerable emphasis on the people and change aspects. As a result, at the initiation of the programme, a change was made to the underlying model for the stakeholder partnership critical success factor. This included overlaying and integrating an IT focused change lifecycle to the system development lifecycle 'V' model, as shown in Figure 4.4, page 67. This included the change phases of:

- Contextualisation
    - To gather input from the nominated stakeholders regarding the context:
        - The current people, culture, behaviours and interactions
        - The current political landscape
        - The relationships and dependencies within the internal and external environments
        - The business cycle and time dimensions to all related activities
        - The problems and critical business issues
        - The information flows and systems within the business
        - The current usage of products
        - The current processes within the business
        - The current systems
        - The current policies
- Conceptualisation
    - To collect input from the nominated stakeholder groups in the design of the new product and changes to processes within the business
- Socialisation
    - To socialise a prototype of the new product and changes to processes with the business
- Realisation

  - To identify with the business support group, the areas of concern and risk regarding the foreseen changes to their business practices
- Familiarisation
  - To familiarise the business with the new product and changes to policy and processes
  - To provide subject matter and expert assurance prior to user acceptance testing and deployment
- Early Adoption
  - The initial take-up of the new product and processes
- Next Generation

Respondents in this cycle, suggested the addition of leadership to the model. This was reviewed with the Doctorate Advisory Board for the Action Learning Set. As leadership was already included in the Team Resiliency Model no further action to the critical success factors was taken at this point in time.

The Stakeholder Partnership model spans the lifecycle of a programme. What was conceived was the need for a change model for the ongoing transition and majority adoption. Further thought will be given to this.

5.1.7 Action Learning; Changes to Actions

Through the various forms of feedback the programme ascertained that it would be necessary in the next Action Cycle to include more business personnel in the familiarisation sessions and to utilise the staff meetings to a greater extent. The Sponsorship Group also suggested that the next level below them be trained and engaged for deployment throughout the Department. It was also suggested that this involvement be made an activity that could be recognised by the Executive Sponsor.

Although the quality of the products provided to date had received positive feedback from several respondents, the programme believed that the quality of design, training material, end product, communications and support material could be further improved.

Communication is vital to a change programme. The programme communicated through several channels. However as there was an incredible amount of change occurring in the organisation, the programme was often adaptive in the channels of communication when greater communication or attention was needed.

Further, the operational readiness focus groups indicated that the stakeholders needed greater understanding of transition and customer support during transition.

5.2 Action Cycle 2 Results State Government Department

5.2.1 Intentions

The purpose of Action Cycle 2 was to evaluate the models and actions, and changes to these from Action Cycle 1, during the second go-live cycle at a State Government Department.

For this go-live cycle, the programme included two new core workflows to be implemented in the pilot business group and in parallel, the start of the implementation of the document management system into the departmental business groups.

5.2.2 Planning

The implementation was under time pressure with the departmental business groups, due to the upcoming business cycle. The new cycle which would consume several business areas, was scheduled to commence immediately following the current schedule. This meant the programme could not have any timeframe slippages. As a risk mitigation, programme resources were retained on a contractual basis.

The workflow implementations for the department were brought forward, to run in parallel with the implementation of the document management. The parallel implementation would require critical resource usage and monitoring to support both the pilot and the department. This meant that there was a shorter business validation cycle for the two automated workflows in the pilot site prior to the go-live decision for all workflows in the department. To support the decision making needed to go live for the department, a go-live review of the previous pilot implementation was scheduled.

5.2.3 Actions

5.2.3.1 Executive Sponsorship

The Sponsorship Group were active during this period with the award of the business group competition and communications around this. Presentations to the executive leadership team were held with key members of the Sponsorship Group leading the socialisation session. Members were active in the design sessions for their own business areas as well as the overall design for the department. The Programme Executive Sponsor also engaged with the intersecting departments to ensure alignment of operations for the automated workflows.

The Sponsorship Group openly supported the programme and were active in their communication and feedback of the programme to the department. Members communicated as much positive feedback and statistics as possible through various channels.

Members of the Sponsorship Group were keenly involved in the familiarisation sessions with their own business groups. These sessions were supported by the programme team but led by the business, as it was found that the attendance and retention rates increased when these sessions were run by the executive of the division.

The Sponsorship Group members were the first to do the online tutorials and undergo one-on-one training. This paved the way for Executive training. They mandated staff attend the group face-to-face training and monitored the acceptance and attendance rates for the various groups and followed up with the business groups when required for staff to be released to attend training.

Members of the Sponsorship Group utilised the transition support to migrate their files to the document management system, following which they then set the departmental example with the use of electronic documents.

As the system was quickly becoming a business critical system, the Sponsorship Group also looked at the service level agreements, business continuity requirements and associated costs of ongoing support. Consideration was also given to an ongoing governance group.

To make the final go-live decision for the department, the Sponsorship Group drew on the information from the go-live review that was conducted.

5.2.3.2 Stakeholder Partnership

The Stakeholder Advisory Groups were once again involved in the validation of the documented current processes and the design of the future processes as well as the design of the classification system. This was an iterative process and their feedback acknowledged and presented back to the groups in subsequent sessions in the design decision logs. All aspects of implementation and change were considered as the two automated workflows for the department would mean considerable change to the business operations and its operational support arrangements. Stakeholder expectations were managed with scope and release management and change control processes.

In this go live cycle, greater emphasis was placed on the familiarisation sessions. Members of the Sponsorship Group, as well as key members from each business unit, were actively involved where they could be. These sessions were incorporated into standard staff meetings or held as separate sessions.

As the standard training did not include the newer web based modules introduced, half hour soundbite sessions were introduced. These were short, sharp sessions that staff could attend quickly in their breaks. This was additional to the increased number of familiarisation sessions and training sessions held.

When the business area with primary responsibility for the automated workflows realised that the go-live was in the near future, they became more and more anxious of the go-live transition support with this realisation. This was consistent with the stakeholder feedback from the operational readiness focus groups in the last cycle. Armed with the understanding from the team resiliency supporting model that risk management is the counter to stress and anxiety, I ran several workshops with the business unit to uncover their perceived risks and to identify the mitigating actions that could be taken. I could then assure the business, as many of these actions were already in place, which reduced their cause for concern.

5.2.3.3 Team Resiliency

The go-live review as previously outlined, required active conflict management during this cycle. This review was conducted by independent consultants. The review created issues for the programme as initially it was constructed as a programme implementation review (PIR). I consulted the literature regarding PIRs at this point. Given that the pilot had gone live only two weeks prior to the initial focus groups, a PIR was not appropriate, so the activity was reframed as a go-live review. However the construct of the review focused on areas of improvement for the programme. The programme suggested that the review collect both positive and negative feedback. There was concern that the key messages about the programme would be misconstrued by the executive if they were only presented with areas of improvement. Further, if the programme only focused on areas of improvement, it would potentially not continue with positive actions. The concern was shared by the sponsors and Sponsorship Group, so that the results and key messages were managed carefully by the programme team and the sponsorship group.

Customer support and service was also required for the refinement of the classification system. Gaining consensus from the business leads was a challenge and a different approach adopted. The team mocked up the folder structures and worked through these with the business leads. The team realised that this was going to be a process of continual refinement. Once again the team required active conflict management, risk management and creativity to resolve some of these issues.

5.2.4 Results and Evaluation Action Cycle 2

The review following the second action cycle, included approximately 28 participants, leaders, stakeholders and team, in the focus groups. Overall, the key critical success factor was Stakeholder Partnership as this was the most transparent to the stakeholders.

There was contrary information provided, such as the requirements being well defined but with the quality of requirements needing improvement. There were 18 categories of information, with the majority relating to the Stakeholder Partnership and Team Resiliency supporting models, 48% and 22% respectively. Every category had positive feedback as well as areas of improvement.

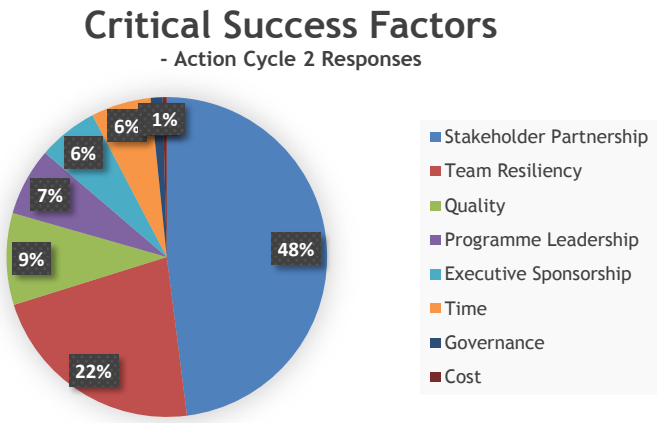


Figure 5.4 Action Cycle 2 Critical Success Factors

Quality represented 9% of feedback. Primarily, the areas for improvement were quality for training, communications and transition and ongoing support from the programme, operations and the external third party supplier.

The Sponsorship Group were not seen largely by the team or end users, although respondents recognised that there was top-down executive leadership and support for the programme. These findings were contrary to the literature and previous findings where Executive Sponsorship was the most critical success factor, (PMI, 2014). However, they illustrate the significant importance and transparency of Stakeholder Partnership and Team Resiliency during delivery.

5.2.5 Emerging Themes Action Cycle 2

5.2.5.1 Iterative Analysis and Design

The iterative process for design and testing of a system in partnership with the stakeholders was very transparent in this Action Cycle. This was largely due to the automated workflows and the business classification scheme, as the workflows required software development and the business classification scheme required development.

Several months after the inclusion of this iterative nature in the Stakeholder Partnership supporting model, this iterative nature was found in Forsberg, Mooz and Cotterman (2005, p.107). The authors displayed the waterfall system development lifecycle model originally created by Royce in 1969. Royce (1969, p.330) included iterative interaction between the various phases of the life cycle to mitigate development risks. Somehow since this date in the IT industry, the waterfall model lost this notion of iterative interaction and became sequential. It has only been over the past decade with

alternative software development life cycles such as rapid application development and agile system development, that iterative interaction has been included in system development.

The iterative design and testing approaches used by a release management approach or an agile approach, require strong requirements management, (Kelly, 2011). Requirements management is part of scope management, (PMBOK, 2013). Requirements management is key for any project and this requires requirement management and change control processes to be in place.

Forsberg, Mootz and Cotterman (2005, p.143) delineated between requirements development and requirements management. The authors proposed that as requirements change over the course of an IT implementation project that the project manager needs to be able to facilitate these changes rather than prevent them. The authors argued that approximately 27% of the original requirements will either be changed, deleted or added to during the project. Failure to respond to changes could mean failure of the project, (Forsberg, Mooz and Cotterman, 2005, p.143). Arguably this should be included into the scope of the projects.

Kelly (2011) supported this notion, as he concluded that all requirements would not be found in an initial requirements development activity. Further, the user's environment is changing while the project is in the development stage, (Kelly, 2011). Kelly also discussed a 'Product Owner' role as a person in the scrum who really wants the system.

Grasso (2009) found a direct correlation between the programme overrun percentage and the time and resources in the requirements and concept definition phase. The author advocated that active management of requirements was necessary to deliver capabilities to meet user's needs in changing environments. Grasso (2009, p.12) stated that "requirements are too often determined in the absence of cost, time and technology and once determined are difficult to change".

For these reasons, requirements management is iterative and to do this requires knowledge of the application and an owner of design. The iterative nature has been included in the Stakeholder Partnership supporting model. Further, prioritisation of requirements needs to include business benefit and value, with cost as a by-product.

5.2.5.2 Programme/Project Reviews

There are different types of project/programme reviews discussed in the literature. The programme and project methodologies, PMI (2013) and OGC (2011), discuss phase gate reviews and end of tranche reviews. These reviews are primarily to determine whether the programme or project is still viable and that the programme is strategically aligned, the realisation of benefits, stakeholder satisfaction with performance and lessons learnt.

Njaa (2008) referred to periodic health checks of ERP implementations to ensure the project is on time, on budget, well governed, achieving objectives and managing risks.

A post implementation review (PIR) on the other hand focuses on whether the objectives were met, the lessons learned and the benefits realised, (Gwillim, Dovey and Wieder, 2005). The authors referred to a PIR as an ex post evaluation with the objective of measuring the impact of the project on business performance. Dogaru (2010) advocated the need for PIRs and that the areas they should review include:

- Final deliverables vs baseline
- The project managers performance
- The teams performance
- Budget and schedule
- Project management methodology
- The initial idea
- Strategic Alignment and how the project impacted business objectives
- Ecological impact
- The PIR itself

This programme used a release management approach, and therefore the most appropriate review was at the conclusion of the go-live of that release. As such, a go-live review was conducted immediately following the event to input into the implementation and decision making of subsequent releases. Given the timing, a review such as this aggregates many of these aspects. The reviews are highly political as Gwillim, Dovey and Wieder (2005) illustrate. The authors found that the socio-political context and power relations and vested interests were a major factor of the evaluation decisions. Gwillim, Dovey and Wieder (2005) also found that the number of PIRs conducted was infrequent and was a neglected area of IT governance.

A go-live review that it used for a release management approach of project/programme management, being a combination of health checks, end of tranche, phase gate or PIRs, reveals a gap between theory and practice. This review has been included in the programme management lifecycle, Table 4.2, page 72.

5.2.6 Action Learning; Changes to Model

5.2.6.1 Stakeholder Partnership and 'V' Model

There were two minor changes to the Stakeholder Partnership supporting 'V' model following this Action Cycle:

- The iterative nature of design and testing. This was supported by the literature as outlined.
- The change in terminology from risk mitigation to 'Realisation' in the change journey, as the business was increasing its awareness and understanding of the changes to business practices and processes and was apprehensive of the change. Risk mitigation was the activity to respond to the apprehension.

The Go-Live Review was included in the model explicitly at one stage, but was subsequently removed following discussion with the Action Learning Set, and included under the heading of 'Next Generation' in Table 5.3, page 143.

5.2.7 Action Learning; Changes to Actions

For this go-live cycle there were a number of activities in which the programme received positive feedback and therefore needed to continue:

- Involvement of the business in the journey; design and testing.
- The quality of design.
- The customer service orientation of the team.
- The leadership from the programme director.
- The communication of the programme activities and timelines.

However, for this go-live cycle there were a number of subtle changes introduced in the programme approach:

- We increased the number of workshops for the automated workflows for the ongoing support areas. This would enable them to manually interrupt the workflows if errors were experienced.
- We carefully chose the stakeholders invited to User Acceptance Testing, so that it minimised the time impost to business users and maximised the result.
- We refined the invitation to the familiarisation and training sessions, so that there was total clarity of communication for stakeholders.
- We included Security of documents in the training and increased stakeholder awareness at the branch level in staff meetings.
- We increased stakeholder support for the migration of documents.

5.3 Action Cycle 3 Results State Government Department

5.3.1 Intentions

The purpose of Action Cycle 3, was to evaluate the models and actions, during the final go-live cycle at a State Government Department that included the deployment of three automated core workflows.

The successful implementation of these workflows was critical to the organisation as the workflows;

- Were core to the work of the organisation
- Included delegation and approval paths that traversed multiple individuals and business groups across the organisation and their locations
- Were high profile as the recipients were the Secretary, the Minister and Cabinet
- Required high quality with minimal rework
- Had critical turnaround timeframes
- Ranged in their security classifications, from public to cabinet in confidence
- Would capture the critical documents of the organisation into a central location
- Would provide consistency with templates and naming conventions for ease of recall of digital documents at a later date

5.3.2 Planning

The deployment was to be a staged, business group by business group over a period of three weeks with a six week support period. The size of the business groups varied between 30 to 150 personnel. Deciding the size of business group, depended whether the business group was located over several locations in the building.

The use of the workflows was expected to vary, according to the previous manual system reports. It was anticipated that one business group would be heavily involved in one of the workflows, whereas another business group would be heavily involved in another. From previous data, it was not common for all of the business groups to be heavily involved in all three workflows.

The workflows, as previously outlined, had been trialled in the previous go-live cycles with the pilot area. However, given the nature of these workflows in the wider organisation, the approval paths for the documents, and the timeframes for the Minister, it was anticipated that the organisation would need both central support and local support.

As such a new service model was introduced for the ongoing support of the system, with business ownership of the workflows and the data in the system. The support of the new systems would be

provided fully by an internal Customer Support Group within the department. The personnel in this group were carefully selected and interested in further tenure in the organisation. The internal Customer Support Group would continue to be supported by the programme team for a period of three months and an ongoing basis by the external Shared Services. Local support would continue to be provided by the members of the programme team for a period of four to six weeks with each business group.

The responsibilities of each group had been clearly defined and agreed with each group prior to this final go live for the department. The members of the Customer Support Group had worked with the programme over several months and were responsible for transition. They were knowledgeable of the service being provided by the external shared services organisation and were determined to provide a high quality customer service.

The resources within the Customer Support Group had been involved in training, familiarisation sessions and knowledge transfer sessions for the three workflows and the system. They had been providing customer support to the pilot area for one workflow and the system since the pilot go-live, Action Cycle 1.

The Customer Support Group had worked through the transition checklist that is outlined in Table 5.1, page 112.

Transition Checklist	**In Place**
Ongoing governance and sponsorship group in place	✓
Series of communications to all staff of deployment schedule	✓
Go Live Announcement and Notification	✓
Frequently Asked Questions (FAQs) available to all staff on webpage	✓
Support 'sheet' of who to call when	✓
Single points of contact within the business	✓
Processes for escalation	✓
Processes for feedback	✓
Changes Policies available to all staff	✓
Risks and issues for BAU identified in a handover document and mitigation activities in place	✓
Configuration documentation at hand	✓
Knowledge of outstanding change requests	✓
Known defect list of application and workflows	✓
All deliverables of the programme available	✓
Position descriptions for all BAU staff	✓
Checklist for local support staff	✓
Roles and responsibilities matrix of all parties	✓
Contracts with suppliers in place	✓
Business Validation, Signoff and assurances in place	✓
Training material available and training conducted or available	✓
Service Level Agreements in place (SLAs)	✓
Warranty Agreements in place	✓
Agreed BAU Funding and Budget	✓
Service Systems in which to log calls, track, monitor and respond	✓
Facilities in place	✓
Operational Reporting in place	✓

Table 5.1 Transition Checklist

The staged deployment would begin with the business groups who were not affected by the current business cycle, or the end of financial year business cycle. This meant that the programme had specific timeframes to train, deploy and support the business groups who were affected by the next business cycle. The business cycles were all consuming for the business groups involved. These had been determined at programme commencement and recalibrated with each go live cycle as the business continued to change in response to demands. This required meticulous planning, negotiation and communications.

5.3.3 Actions

5.3.3.1 Executive Sponsorship

Members from the Sponsorship Group were actively involved in the familiarisation sessions. The familiarisation sessions were chaired by an executive from the Sponsorship Group, or a senior manager from the business group and the format of these sessions involved one or two managers and staff. This required initial training and rehearsals, with support from the programme team members. The result was greater attendance, sometimes reaching 60% attendance rate.

Enrolment into training was initially around 40% which was not going to enable the users to respond in a timely manner, for the delivery of documents for the organisation and the Minister. The Sponsorship Group stepped in and mandated training. This message was communicated to the business executive and through their communication to staff. As a result training enrolment increased to 96% and attendance was approximately 80%.

5.3.3.2 Stakeholder Partnership

Communication of the go live schedule was vital and several channels were utilised to ensure staff were aware of all activities and the dates. The programme used the organisational newsletter for the achievement of go live, and celebrations for the business group winner of the competition, the programme communique to outline the dates and what to expect and an email from the head of the business group to also outline the dates, events and training and what was expected of each staff member. These included the face to face familiarisation sessions, updates in branch meetings and support analysts. The rationale and the objectives of the programme were communicated in every session and there was a focus on consistent messages to manage expectations. Through these channels and activities the programme prepared users for early adoption of the system.

A three tier training strategy was used; familiarisation sessions to see the new system and workflows in action, face to face classroom style to use the system, and support from the 'floor walkers' when using the system in their own environment. Drawing from experience in the previous go live cycles,

additional familiarisation sessions were scheduled for each business group. They commenced one to two weeks prior to the Go Live for the specific business Group. The 'floorwalkers', began to walk the floor and respond to any questions while the users were in their own environment and using the new workflows and system.

To support the organisation even further, we constructed 'training soundbites' which were one hour sessions that staff could come to. These were supported by online training videos. These training soundbites focused only on the automated workflows and security and were well received by the business due to the demand of the business cycle.

On the nominated day of Go Live, the central Customer Support began to take the support calls from the two business groups that had gone live.

The first week of go-live was positive. The business was engaged with the new process and used the new system with great success. There was one branch that completed a workflow end to end without a page being printed. Many other workflows were turned around in less than a week. Staff adapted more quickly than expected.

The number of workflows increased dramatically, and there were 1000 put through the system in the first 57 days, and over 1900 in the first few months. This was an average of 18 per day, which was more than anticipated and more than the manual system. In the manual system, on average 13 per day were being completed. The %rework was unknown, however it was believed to have been considerably lower than in the manual system and the approval process was streamlined. There was no necessity for the manual movement between locations, (which increased the time to respond) which in turn increased the quality of our responses.

The internal Customer Support Group began to support the business and there was an anticipated 'flurry' of calls when each business group went live. However, there were concerns expressed regarding the customer service being provided by the Customer Support Group. Users of the system began to bypass this group and call the programme team members directly to assist with their enquiries. Over the course of the following month, the situation began to threaten the adoption of the system and negate the preceding 12 months of activities stakeholder engagement in the change journey. The programme sponsor restructured the group and the situation was arrested.

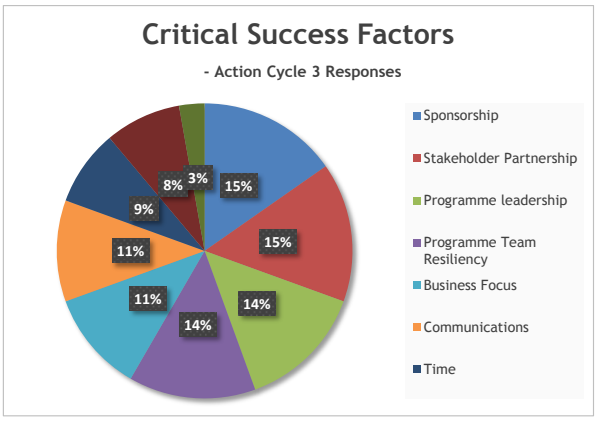
The automation of core workflows improved the business way of working. As a result the organisation began to adopt a more flexible collaborative approach. The changes to business practices began to be embedded in the organisation and stakeholder adoption after the first quarter was estimated between 70%-85%.

5.3.4 Results and Evaluation Action Cycle 3

Following Action Cycle 3, the models and the actions taken were evaluated. The evaluation took the form of Action Learning and reflection, observations and structured interviews. The structured interviews were with 12 stakeholders who had been involved with the programme. This was a critical period for the evaluation of the model and actions as this was the final go live within the client and with only the deployment to the other business groups remaining.

Following Action Cycle 3, participants concluded that the four most important things were:

- Programme Sponsorship, referring to the Sponsorship Group
- Stakeholder Partnership, referring to stakeholder involvement and collaboration
- Programme Leadership
- Programme Team Resiliency, referring to the programme team and its resiliency.



This is illustrated in participant's responses in Figure 5.5, page 115.

Figure 5.5 Action Cycle 3 Critical Success Factors

Programme Sponsorship and Stakeholder Partnership were both considered to be critical to the success of the programme by all respondents. Stakeholder Partnerships avoids the 'blame game' and looks for solutions with a positive mindset. The Sponsorship Group was a good mechanism to keep track of the programme. For the programme to have achieved the change in such a multi-faceted highly entrenched culture within such timeframes was significant. The results from this action cycle of the significance of these four critical success factors is further supportive of the literature.

Respondents believed that it had been a very successful programme, with a positive cultural change and adoption of new practices. They believed that the programme was also widely considered by the organisation to be successful. The change was not just about technology, but a shift in mindset from paper to electronic. The uptake was believed to be driven by the automation of processes.

Respondents believed there had been a compelling case for change and a clear vision of the end environment. There had been Executive Sponsorship, driven programme leadership and active leadership from the Sponsorship Group. There had been a shared understanding, a united front that was dynamic with commitment and leadership from the Secretary down. Stakeholders had been

involved and there had been significant collaboration. The team had been competent, business focused and resilient. There had been communication, repeated socialisation and familiarisation sessions and FAQs sessions. Planning, the stakeholder interdependencies schedule, tracking and deliverables management all led to the success of the programme.

Respondents highly supported the expansion of the Stakeholder Partnership supporting model and believed that with the additions it was now very comprehensive of the adaptive approach and change journey. One further suggestion included, was for cultural/technology alignment to include the capacity of the group to absorb and embed change. The respondents believed that the activities added built the case for change and the initial guiding coalition, with the ability for early adopters to become key promoters. They believed that the components of the model were transparent in the change journey, and that these components were key to a successful change program.

Overall, the programme's success was believed to be due to the focus on the people elements that had extended the 'iron triangle' in the Strategic IT-Enabling Change Programme Model. It was believed that without this change focus that the programme may not have been successful and may have failed.

The iterative approach was appreciated by the team and the business so that minor changes to the system could be made and better practices as a result. The approach gave the results needed and provided the shift required for the total way of working. Although the organisation had a very highly skilled workforce, it was believed to have had a very change resistant culture. There was early majority adoption with a few pockets of resistance and non-adoption. The respondents believed that the business began to adopt a more flexible collaborative approach.

With such short implementation timeframes, constrained business cycles and high risk, this programme was heralded as very successful. The change to business practices and automation of core processes, also meant that this system was now business critical. This required additional discussion at the executive level and with the service provider and measures put in place to support this.

The key inhibitors to success of the programme were thought to be:

- Immature technology
    - The technology did not support a key function that was required for the implementation, nor did it seamlessly support the integration of the web module with the document management system. This was due to product development changes and differing priorities of functionality in the versions released during the timeframes to

those initially understood. This inhibited the use of the application and adoption by stakeholders.

- Service provider
    - The service provider operated in silo's inhibiting a smooth coordination of all resources required for the implementation. In addition as this was a multi-tenanted application, the configuration of the global settings were a constraint for the system design.
- Customer Support
    - The business operational model was changed to insource the customer support of the system. The team was restructured to enable greater customer service.
- System Design
    - The categories or folders for information in the electronic environment required rework following initial use of the system. This had been anticipated.

Respondents concluded that every IT project should be run in the same manner of an IT programme as they all bring about change, are multi-dimensional with many interdependencies and need to be adaptive. They all need strong stakeholder partnership, active executive sponsorship, leadership, and the right teams with resiliency and a business focus. Key to this was identification of the Sponsorship Group and proxies, the stakeholders and the right teams and a measurable business outcome. The respondents believed that the programme success was about the people and having solid foundations and that the models were outcome focused.

For future programmes, respondents believed that the models need to be linked into the IT programmes transparently.

5.3.5 Emerging Themes Action Cycle 3

5.3.5.1 Stakeholder Partnership - Transition

Although transition has been put forward as one of the contributing areas to programme and project failure, (McManus and Wood-Harper, 2007), the importance and magnitude of impact of customer service was a surprise to the programme. It was so significant that this phase was added to the Stakeholder Partnership model.

Pyrne (2013) found that transformation programmes often focus on the delivery of new capabilities rather than on the organization's ability to support and exploit the new capabilities. Pyrne (2013) does however, discuss how the roles of operations and change differ, and points out that the mindset of both operations and change need to have a customer focus to be effective. Such was the

magnitude of the impact of transition to customer service, that 'Transition' was included as an activity in the Stakeholder Partnership supporting model.

There are many checklists available for Transition planning. These include documentation, people, roles and responsibilities, deliverables, training, budget, risks, helpdesk, tools, measures, reporting, and performance. Over 20 of the industry Transition checklists were reviewed and found not to include Customer Service, or mechanisms to develop it.

However, the outcomes and attributes can be put into service level agreements (SLAs) between the Customer Support Group and the users of the system, (Ternoway, 2005, pp.9). Ternoway (2005) suggests the use of measurement and use of a transaction satisfaction survey following each call to improve customer service. A broader customer satisfaction survey will only provide a macro and long term view.

This suggestion has been added to the Transition checklist in Table 5.2, page 118.

Transition Checklist	**In Place**
Customer Service Measures	
Ongoing governance and sponsorship group in place	
Series of communications to all staff of deployment schedule	
Go Live Announcement and Notification	
Frequently Asked Questions (FAQs) available to all staff on webpage	
Support 'sheet' of whom to call when	
Single points of contact within the business	
Processes for escalation	
Processes for feedback	
Changes Policies available to all staff	
Risks and issues for BAU identified in a handover document and mitigation activities in place	
Configuration documentation at hand	
Knowledge of outstanding change requests	
Known defect list of application and workflows	
All deliverables of the programme available	
Position descriptions for all BAU staff	
Checklist for local support staff	
Roles and responsibilities matrix of all parties	
Contracts with suppliers in place	
Business Validation, Signoff and assurances in place	
Training material available and training conducted or available	
Service Level Agreements in place (SLAs) with internal customers	
Service Level Agreements in place (SLAs) with external providers	
Warranty Agreements in place	
Agreed BAU Funding and Budget	
Service Systems in which to log calls, track, monitor and respond	
Facilities in place	
Operational Reporting in place	
Transaction Customer Satisfaction Survey in place	
Quarterly Customer Satisfaction Survey in place	
Quarterly Customer Service Excellence Awards in place	

Table 5.2 Transition Checklist

5.3.5.2 Stakeholder Interdependencies vs Partnership

The third dimension of the Strategic IT-Enabling Change Programme model, had been titled 'Stakeholder Interdependencies'. This had originated from the construction of the Stakeholder Interdependencies Schedule. However a new term was sought to be more inclusive of the change and delivery 'V' model, the Stakeholder Interdependencies Schedule and the Concept of Operations.

Further research was conducted to ascertain the most appropriate nomenclature. The terms Stakeholder Management and Stakeholder Engagement were considered. These terms were frequently referred to within the project programme management methodologies, (OGC, 2011; PMI, 2013). Stakeholder Engagement referred to the communication with stakeholders and obtaining their buy-in to the programme. The term collaboration was explored. It was determined that collaboration was used interchangeably with the term partnership and was often coupled together as 'collaborative partnerships'. Collaboration was defined as a process of engaging stakeholders in finding a solution to a problem, whereas the term partnership referred to working and committed relationships. The term 'Alliance' and the term 'Public Private Partnership (PPP)' were also explored however their operating models did not appear to lend themselves to a strategic change and IT enabled programme.

The intent behind the terminology is for all stakeholders to drive and work together for a result. The term 'Stakeholder Partnership' met this intent. The intent was supported by Scott (2001; p2) with his definition of partnering being the "express intent of improving performance in the delivery of projects" and that "the best results are achieved when client and project manager work together in partnership", (Turner and Muller, 2004). The term 'Partnership' was defined as "a collaborative relationship with a clear and shared sense of purpose involving key stakeholders focused on an agreed outcome", by the Victorian Department of Education and Early Childhood Development (2011; p.3). This Victorian Department openly acknowledged that it can only deliver its reform agenda with formal and informal stakeholder partnerships.

Partnering was defined by MacDonald (2005; p. 3) "as a commitment by those involved in a project ……. to work closely or cooperatively, rather than competitively and adversarial". MacDonald (2005; p. 3), went on to state that "Partnering is a method which allows people to minimise or avoid conflict when they are engaged in a complex project. It is a way of unifying all the parties as stakeholders in a project into a team. Partnering has also been described as ……..doing business based on trust, respect and good faith ….. and when a person's word was their bond and people accepted responsibility." These statements summarise the working relationship required with stakeholders in a change programme.

Carnwell and Carsen (2009; p.17) presented a continuum of involvement, illustrating a view that collaboration is a subset of partnership.

Figure 5.6 Collaboration and Partnership, Carnwell and Carsen (2009)

For the IT-Enabling Cultural Change Programme to succeed within this Action Research, it needed stakeholder partnerships with the business, business divisions, service providers, the programme team and the Minister's office and Cabinet. I had to firstly build trust with stakeholders in the organisation, respect the varying points of view and unify the differing opinions to reach agreement in design and throughout the implementation. Further the stakeholders were involved in as many stages of the implementation journey as possible, and through their cooperation, collaboration and ownership of the business resulted in stakeholder partnership. Without these collaborative and mutually beneficial relationships, the programme would not have been successful.

Subsequently, the people related critical success factor and the supporting model were changed in title to 'Stakeholder Partnership'.

5.3.6 Action Learning; Changes to Model

There were three changes to the underlying models following this Action Cycle.

5.3.6.1 Separation of Sponsorship from Governance

The programme had had a separate Sponsorship Group for 85% of the program. However, it had not been visually separated in the supporting model. When the Action Learning group was formed in Victoria Government, greater clarity of the role of the Sponsorship Group and the Programme Board was required and as a result, these entities are now separate.

5.3.6.2 Stakeholder Partnership 'V' Model

There were two major changes to the Stakeholder Partnership supporting 'V' model following this Action Cycle:

- The addition of two further levels to make the steps in the process explicit.
- To make programme leadership transparent.

The Stakeholder Partnership supporting model was extended with two additional levels with agreement from all respondents.

- The first additional level included Business Contextualisation and Business Outcome.

  - Business contextualisation includes the diagnosis of the business to ascertain the real business problems the programme needs to address and the constraints that the organisation is facing to resolve these problems. Without this intervention, the programme risks implementing a solution that will not address the core business problems or requirements. Understanding the business context provided valuable input to designing and delivering a change programme. The change and system development lifecycle were expanded to include "Contextualisation" with "Early Majority Adoption" as the targeted result. The change journey became transparent to stakeholders during programme implementation.
- The second additional level was to capture the alignment of the culture and technology and to amplify the importance of transition to business operations.

5.3.6.3 Programme Leadership

Leadership, both from the executive, the Secretary, the programme and the business were regarded as being instrumental to the success of the programme. The phrase "driven programme leadership" was used to describe the mode of operation of the change programme. Programme Leadership had been included in the Team Resiliency model but was not transparent for Stakeholder Partnership. Following several discussions as to the inclusion of Programme Leadership in the title or in the central model, it was concluded that programme leadership be included in the Stakeholder Partnership 'V' model.

5.3.7 Action Learning; Changes to Actions

There were no major changes to the approach following this Action Cycle, however there were changes made by the programme that had a significant impact to the business.

Firstly a change was made to the newly formed customer service group structure to enable them to be more customer service focused. The usage of the system, due to the workflows, was not a gradual adoption as originally envisaged. The changes to the service group eased the tension of transition to the new systems and automated workflows. Additional resources were also deployed to assist staff work through the categorisation of information with the business. As staff began to use the system and business groups began to collaborate, the tightness of the security of information began to be questioned as it was found to be an inhibitor of collaboration. Monitoring of the system in operations was initiated.

Secondly, the programme increased the number of familiarisation sessions with the business, both as separate sessions and in conjunction with staff meetings. The additional familiarisation sessions

enabled a greater number of staff to gain an overview of the new systems prior to training and usage. What was noted however with the smaller business groups, was that the event markers of the go-live and deployment change events in the larger business groups, decreased. These had provided a sense of celebration and visibility of the ability to utilise the system. The effect of this was not visible, but it may have had a slight bearing on the need for additional sessions.

Programme resources were retained to work with the business to embed the systems. A survey is planned in the next 6-12 months to ascertain the business benefits.

5.4 Action Cycle 4 Results State Government Departments

5.4.1 Intentions

The purpose of Action Cycle 4, was to evaluate the models and actions through their use by Executive and programme managers in additional State Government Departments. An Action Learning Set was also used to enable exploration of the effectiveness of the model and problem resolution throughout the programme lifecycle.

There were two Action Learning Sets set up:

1. The first, a Doctoral Advisory Board, comprising 4-5 Chief Information Officers, (CIOs) from state government departments, to explore Executive Sponsorship in the study
2. The second with programme managers from each of the government departments involved in the study.

5.4.2 Planning

This Action Cycle 4 was within State Government Departments and included four departments at the outset to form the two required Action Learning Sets.

A Doctoral Advisory Board was convened, comprising the Chief Information Officer (CIO) from each of the departments. The Chair of the Doctoral Advisory Board was a CIO who also chaired the cross-government CIO council. Terms of Reference for the Doctoral Advisory Board were set up akin to a Sponsorship Group. It is important to note that the Doctoral Advisory Board was an advisory body for the study and not a governance body for the Department's programmes. Terms of Reference can be found in Appendix 2.

The Doctoral Advisory Board for this research included sponsors for each Department's participants. The roles of the Doctoral Advisory Board was to provide sponsorship to all participants, continuing executive commitment to promoting and supporting the participants, champion the research, and act as a feedback mechanism to the government departments involved.

The Doctoral Advisory Board represented the interests of the Departments, ensuring the direction of the study and the programmes aligned with the department's business. The Doctoral Advisory Board established the values and behaviours required by the change effort to ensure the programme managers motivation, promotion of team-working, empowerment at all levels, encouragement of initiatives and recognition of appropriate risk taking.

Each member of the Doctoral Advisory Board had overall accountability for the change within their own department to ensure that both the research programme and the implementation programme continued to meet the objectives of the Department, as well as ensuring the interfaces with stakeholders were effective.

The structure of the Action Research is shown below in Figure 5.7, page 124, to highlight the Doctoral Advisory Board for Action Cycle 4.

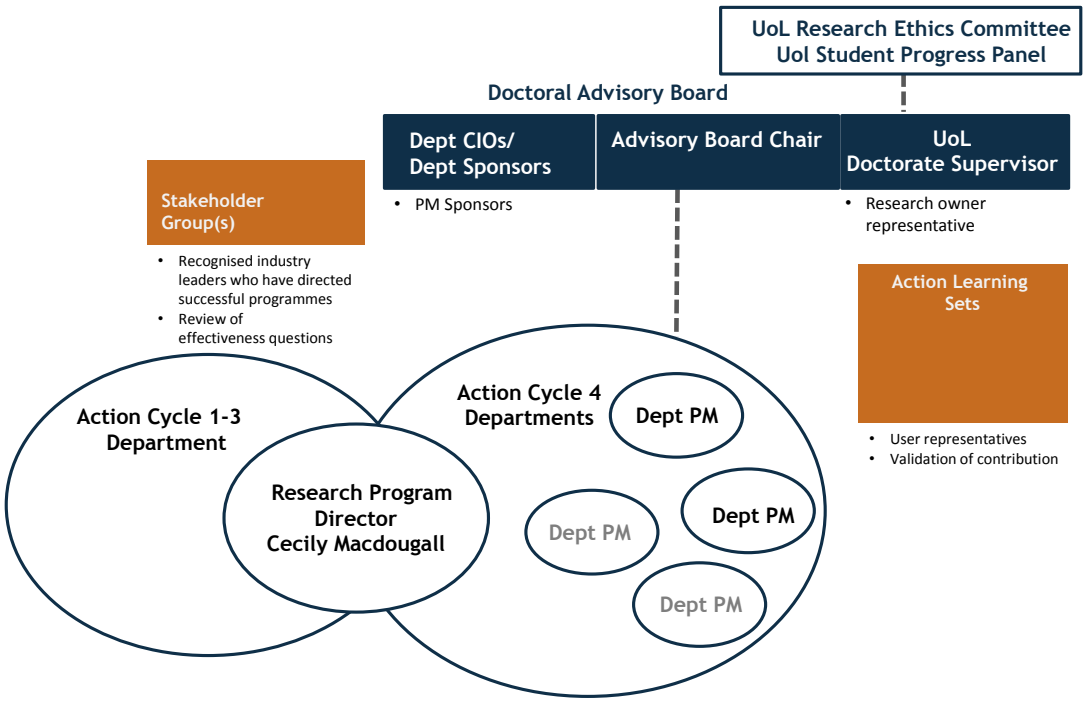


Figure 5.7 Action Research, Action Cycles and Action Learning Sets

A participating programme manager with an implementation programme was sought from each Department. The programme manager was to be a full time government employee and to have a grounding in project management. The programme manager was to trial the use of the models in their own Department or to utilise 'a thin slice' of the models that was most applicable to the stage of the programme and dependent on activities and timeframes of their programmes. This would provide a certain amount of capability uplift and benefits to the programme manager.

The Doctoral Advisory Board met on a monthly basis with the participating programme managers to provide an update and share the learnings of the journey. I continued to contribute to the Action Learning Set with contributions from Action Cycles 1-3.

The timeframe for the evaluation was initially determined and agreed to be over a period of five months.

5.4.3 Actions

The first meeting of the Doctoral Advisory Board was focused around the details of the model and the evaluation. It was noted that a staged approach could be taken and that it takes time to build an evidence base. There was considerable discussion to determine the programmes and programme managers to be involved in the Action Learning.

The components of the model explored by three Departments and the programme managers included:

- Executive Sponsorship for an organisational change in a Department. The Department was embarking on organisational change, which would impact several key stakeholders. The programme was in a formative stage. As such, it was believed that the programme could benefit from forming an Executive Sponsorship Group that could provide the sponsorship for the change.
- Familiarisation Sessions, an activity within the Stakeholder Partnership supporting model, for a technology deployment that would introduce change to a Department in the way staff were operating. The Familiarisation sessions were a mechanism that would introduce the change into the environment and gain initial stakeholder adoption. It was envisaged that the deployment of the technology would be floor by floor. The Familiarisation sessions would be constructed also floor by floor and require the involvement of key influencers from each floor to lead and be involved in these sessions. As per the lessons in Action Cycle 1-3 this was shown to gain greater buy in for early adoption.
- The third department chose to embark on a programme that would trial the conceptualisation and socialisation sessions, an activity within the Stakeholder Partnership supporting model, for an industry IT change programme. Following this, key influencers for each area were to be identified and timing of the sessions to be established. The programme was in its initial phase of creation.

The CIOs of the implementation programmes outlined above, believed they had the ability to provide sponsorship to the programme manager involved in the study.

Initial meetings were held with two of the three programme managers of these implementation programmes and the models explained in detail. In addition, supporting material that I had used in the previous Action Cycles was provided.

For the implementation programme embarking on organisational change, meetings were scheduled with Executive and Senior Management who were identified as being potential Sponsorship Group

members. However, in Government the order of the meetings were as per the hierarchy. This caused considerable issues, as the existing day to day sponsor was remote to the programme and the organisational change. As such a meeting was held with the Executive Sponsor. The benefits of the Sponsorship Group from my experience were discussed, however just as I had initially experienced in Action Cycle one, there was difficulty in comprehending the difference between a Programme Board Governance and a Sponsorship Group and its value. The Executive Sponsor also informed us that the day-to-day sponsor had resigned. As a pre-requisite to setting up the Sponsorship Group, the Executive Sponsor required a period of time until a day-to-day sponsor would be appointed. Meetings with the other Executive were therefore put on hold. By the time a new day to day sponsor had been appointed, one of the Executive had moved on and another was needed.

However, prior to further appointments being made, the new day-to-day sponsor requested a review of all the programmes and projects in the portfolio. The result of this review required a portfolio view of all the programmes and projects that were currently in progress or in the planning stage. The review of the programmes and projects re-prioritised the portfolio and provided the requirement for the formation of a prioritisation committee. Acceptance of the need to form a prioritisation committee was the first step in the organisational change. The formation of the prioritisation committee and the Sponsorship Group were still in progress at the conclusion of the cycle.

The second Department, had embarked on Familiarisation sessions for a technology desktop rollout, part of the change lifecycle within the Stakeholder Partnership supporting model. The current learning sessions were voluntary and were being run out in the regions. The sessions in the city were due to commence in two months post the conclusion of the regional sessions. The planning and buy in for one or two of the sessions in the city to be run by the CIO was conducted. However the CIO moved to another Department prior to these sessions being held. There were a number of people involved but the PM found that from the role of the PMO, the PM could not raise alternate line management or sponsorship for the activities. A replacement could not be found as the programme was seen as just a technology deployment. The city sessions were not well attended, three sessions per day with 20 seats per session. The sessions were conducted as an information session only.

The second department then looked at another programme where the PMO had ownership for the transition to business operations for a key business group. Transition is now an activity in the system development lifecycle within the Stakeholder Partnership supporting model. This

programme required bringing two business group activities together and centralising the support for the technology. Sponsorship was sought from the two business areas involved in the programme and the activities progressed. However the lead sponsor then took extended leave and returned to another area. Lack of consistency in sponsorship was difficult for the programme as business issues that required escalation, such as resources and union issues, could not be escalated and resolved in a timely manner. Project, programme and support structures and roles are different and were communicated, service level agreements were put in place, a stakeholder map was put in place and risk workshops conducted. The programme was then delayed in its go live until resources and union issues had been resolved. At the conclusion of the Action Cycle, the programme was about to go live.

The third programme required an introduction by the CIO to the programme manager. This was to take place when the CIO returned from leave. Appointments were set, but then needed to be rescheduled. Then there was an election and this programme was put on hold. Another programme that was being formed was discussed. The CIO was to be the sponsor for this cross government programme, but did not believe that they would be the Executive Sponsor. This programme also required lead time as it required Cabinet approval for funding. However the department was then reconstructed post the election and the programme discussed was put on a 'back burner'.

The fourth department struggled with the concepts and had difficulty ascertaining which programme would be able to evaluate the models in the timeframe required. Ill health of the CIO then precluded the continuation, and the possibility of any involvement within this Department in the Action Cycle.

During this period, there were six meetings of the Doctoral Advisory Board and a dozen meetings with the programme managers. Throughout these meetings, the Doctoral Advisory Board members were instrumental in the decisions of nomenclature of the model and underlying models. They were supportive of the programme managers and accompanied them where possible to generate the activities required to move the programmes forward. For example, the term 'Stewardship' was suggested, however the term was not thought suitable, whereas the term 'Stakeholder Partnership' was unanimously agreed. In addition, the Doctoral Advisory Board agreed the change to the graphic of a Programme Board and Sponsorship Group to provide further clarity and extension of the Stakeholder Partnership Model.

5.3.4 Results and Evaluation Action Cycle 4

The Action Cycle was limited in the number of participants. Four CIOs and four programmes were initially identified. Further departments were going to be sought through the CIO forum, however

due to elections, holidays and changing personnel, the opportunity did not present itself within a timely manner. Progressively, two CIOs did not continue due to personal and professional issues. Two CIOs, two programmes and two programme managers remained with the Action Cycle for the entire timeframe of the evaluation.

The Action Cycle highlighted several concerns in Government programmes, including:

- Most programme managers operate within the business, and technology is a component of these programmes. In this research, the CIOs were not the line managers of the programme managers involved and therefore could only influence rather than manage or control events and activities.
- That the CIOs are generally not the owners of programmes and are therefore not the sponsors of the programmes. Programmes are determined by the business areas and typically for that business. IT-Enabling Change Programmes are therefore difficult to obtain organisational commitment, as per the IT-Enabling Change Programme in this Action Cycle. Some projects and programmes are delivered 'under the radar' as per the transition programme example in this Action Cycle.
- That most project and programme managers in government are not full time employees, but contractors on fixed term contracts. The expectation of government is that the contractors have all the capability that is required to deliver a successful programme. The implication for government is that there is typically no organisational capability uplift required. This initially posed a problem for this research project for the timely identification of programme managers who were internal staff and who would benefit from being involved.
- The government has another dimension of politics that needs to be navigated to deliver IT-Enabling Change Programmes successfully. For example, the State Government went into a lockdown for three months in the middle of this study, prior to State elections. The implication to this research project was that two projects did not continue.
- The timeframes required to mobilise any projects and programmes within government is considerable. The business cases for all programmes and projects are now required to be evidence based, and provide tangible benefits as justification to proceed. The Doctoral Advisory Group at the outset, raised concern that the initial time period of five months for the time period for the study would not be of sufficient duration to evaluate the effectiveness of the model. The timeframe for the evaluation was extended to nine months.
- It was noted that the lack of consistency in resources in Government, both from a sponsorship and a staff perspective has an impact to delivery.

The Doctoral Advisory Group articulated that members of a sponsorship group needed to be:

- Enablers of the change
- The voices of those to whom others listen
- Identifiers of champions and communicators
- Facilitators of the outcome
- Actively involved.

A Sponsorship Group is needed for cross-functional or cross-organisational programmes. The Chair of the Sponsorship Group is the Executive Sponsor and the appointed to be recognised by the organisation.

The programme managers need sponsorship from both a day-to-day sponsor and an Executive Sponsor. However, initially during this period, there was no assigned day-to-day sponsor. Without an assigned sponsor, the two programme managers could not generate the sponsorship needed to get their programmes going, even with the support from the members on the Doctoral Advisory Board.

The programme managers acknowledged that the Action Cycle and Action Learning Set was beneficial to them on a personal and professional level and helped them learn about Sponsorship, Governance, Familiarisation and Transition and apply the learnings. They confirmed that it connected them with others whom they had not known before. The Action Learning Set also provided a mechanism for the programme managers to understand another's experience and what could be done if confronted with that problem in the workspace.

At the conclusion of this Action Cycle, the first programme had gained acceptance to the new governance structure for the organisational change, and was in the process of establishing this. The programme was also re-establishing a Sponsorship Group for the organisational change programme. The second programme was about to go live and successfully transition to 'business as usual'.

At the conclusion of the Action Cycle 4, it was unanimously agreed, that the two most critical success factors for successful programmes were:

- Programme Sponsorship
- Stakeholder Partnership

> *"The identification of sponsors and members on the Sponsorship Group is key to the success of a programme. In addition all programmes and*

projects rely on stakeholder partnership."

Thus this result is supportive of the model and previous findings of the Action Research. Usage of the underlying models was only conducted in part by the programme managers, due to the lifecycle stages of their programmes.

Programme Leadership was discussed on several occasions, predominantly from feedback from my own programme implementation. The Doctoral Advisory Board members believed that leadership was a part of change and that programmes included change, therefore no change to the models was necessary. In addition, having a model to operate by does not provide leadership. Members considered that leadership was a behavioural element and was already included in the underlying models. However, it was suggested that programme leadership be amplified in the underlying models.

The Action Cycle provided learning that was applicable in the work and personal environments. The actions taken supported the constructs and were undertaken in an intended manner. The main impediment was the lack of day-to-day sponsorship of the programmes to assist the programme managers gain traction in the implementations. Through the Action Cycle the programme managers developed their relationships and ability to bring about change in their respective organisations. They also developed themselves and their understanding of the business. In addition, the Doctoral Advisory Board meetings provided a forum where the programme managers could report on their actions and problems, which in turn enabled the CIO's to guide and support the professional development of the programme managers.

The use of the Action Learning Sets supported the development of the competencies of the programme managers. A continual problem the programme managers were faced with in this Action Cycle was the lack of sponsorship for their programmes. Without sponsorship a programme can stall or it can fail, as was experienced in this research.

Further, it was concluded that all IT projects should be run as IT-Enabling Change Programmes.

5.4.5 Emerging themes Action Cycle 4

There were several emerging themes from this Action Cycle that were synergistic with the previous Action Cycles.

5.4.5.1 Frequency of Action Learning

Utilising an Action Learning Set was an appropriate mechanism to work on significant problems in programme management. In the Action Learning Sets, members queried if the frequency of the Action Learning Sets was sufficient and whether there was any correlation between the frequency of the sets and the outcome. Pedler (2008) suggested meeting for a half or full day, every four to six weeks over several months to a year. This would equate to 1 hour per week or 1.5 hours per fortnight. The bi-monthly meetings for programme managers were usually between 1.25 and 1.5 hours, sometimes one on one or sometimes together, which was consistent with Pedler's (2008) suggestions. Pedler (2008) also suggested the periodic use of conferences to provide a forum for connecting with senior management to report and share experiences and problems. This was addressed by the programme managers meeting with the monthly Doctoral Advisory Board. The Doctoral Advisory Board meetings ran on average for 1 hour. This was consistent with the findings by Mann, Ball & Watson (2011) whose sessions for clinicians equated to 1.2 hours per week. The frequency of the Action Learning Sets appears to be consistent with the literature.

5.4.5.2 Sponsorship and Sponsors

PMI (2010) found that active executive support was a critical success factor and was needed to inject energy, support the team and professional development for the leaders. This was exemplified in this cycle as members concluded that the most important thing that a programme manager needs is a sponsor to turn to, for backing and support, and to bounce ideas and challenges with weekly, and for escalations and resolutions either weekly or fortnightly. Without a sponsor, a programme manager was seen to be isolated, as a programme or a project is not part of the operational organisational structure. In the operational organisational structure, there are typically weekly or fortnightly staff meetings, both on an individual basis and group basis where business information is communicated. Communication for the programme team is usually through programme sponsorship and was seen to be critical for the continued alignment of the programme with the business and therefore its success.

Ownership and accountability for programme delivery and achievements rests with the programme sponsor, (OGC, 2011). "The Sponsor has overall ownership of a change programme and is ultimately accountable for the successful delivery of the expected benefits", (ILX Group, 2010). The sponsor defines the boundaries for the programme, secures the funding, chairs the Programme Board/Steering Committee and is the "driving force behind a programme", (OGC, 2007, p.248). For a programme, the sponsor is normally at an executive level. Given executive working demands, the time to provide the programme and support the programme manager can be limited.

As an alternative, a successful model that has been used for several Change and IT enabled programmes, includes an Executive Sponsor and a day-to-day Sponsor. The Executive Sponsor deals with escalated matters at a strategic level of the programme, and does not become engulfed in, what is to most executive, the foreign territory of IT, whereas a day-to-day sponsor is involved in the weekly, daily tactical and operational level of the programme, (Macdougall, 2014). The day-to-day sponsor is a permanent staff member who has delegated authority whereas a programme manager if often on contract and has very limited organisational authority. The role of the day-to-day sponsor is therefore crucial, as they are acting as a liaison with executive, the business and the programme, Macdougall (2014). This model was employed in Action Cycles 1-3 and was brought into Action Cycle 4.

5.4.5.3 Stakeholder Partnership - Contextualisation and Conceptualisation

Working with the Doctoral Advisory Board, there was consistent discussion of the programme within its organisational context. This required the programme managers to have a wider lens than previously. Blomquist & Muller (2006) discussed the need for programme management to increase its focus from the details to those of context and risk. Understanding the context of the organisation, the people, the systems, the structure, the values, perceptions and beliefs, the business cycles, the interaction of information between internal and external environments, and the constant changes to this context was found to be key to the adaptive nature needed by a change programme and its adoption.

Further, many of the causes of project failure recently identified by the PMI (2015) include areas that would be addressed through the critical analysis of the context of the organisation, such as understanding the organisational priorities, the programme and project vision, goals and objectives, the business requirements, the risks, the estimates for time, cost and resourcing and a greater understanding of the change and communication required.

As such, contextualisation and conceptualisation are considered critical to the success of a change programme and seen as independent elements in the model and included as such.

Context was referenced in the literature emerging from systems engineering. In trying to respond to the complexities faced by management and to assist in exploring a problem situation, Checkland (2000) with his system engineering background, created a Soft Systems Methodology (SSM). SSM was used for systems and as a mechanism for inquiry in this study. Further, as outlined by Forsberg, Mooz & Cotterman (2005) systems engineering begins with understanding the problem, its complexities and its context prior to the creation of a solution. This literature is supportive of the models and was supportive of the findings in this research.

5.4.5.4 Programme Management Skills and Competencies

During this cycle, programme management skills and competencies became topical. Given the need for change and technology implementation, the skills and competencies that became apparent included the ability to analyse, consult, define problems, comprehend system and solution designs, and the technology lifecycle. Business analysis was needed to identify stakeholders and analyse business context and IT problems and risks, solution and system design to manage scope and system integration, and consulting to manage expectations and alignment and IT to identify risk.

There were also additional qualities identified that were needed by the programme manager, such as drive and energy, to cultivate organisation energy that provides the momentum and focus to move the programme forward to deliver to timeframes. What was seen by the programme managers in this cycle was where drive and energy was not apparent, the programme lingers on and on and eventually is either partially delivered or fades away without delivering.

The management of stakeholder expectations was found by Crawford & Pollack (2003) vital to success and stakeholder management a key competency, (Crawford and Nahmias, 2010). Pellegrinelli, Partington and Young (2003) created a four tier framework for programme management attributes and found that programme managers needed to be business focused and capable of managing in uncertainty. More recent research by Crawford, Aitken and Hassner-Nahmias (2014) investigates competencies for project and change implementation and includes facilitation, communication, stakeholder relationship management, influence, team building and many more. However, the competencies determined above have not been found to be explicit in the literature.

5.4.5.5 Ongoing System Ownership and Knowledge Management

As discussed, the second programme in this Action Cycle focused on transition; commissioning and handover of a new system. As the programme and technology crossed multiple business functions, it raised the questions of ongoing system ownership and associated asset and knowledge management. Who would own the business application, either the workflows or data and who would own the technology? Who would ensure that staff are adequately and continually trained in the application? How do staff discover all the functionality in the business application once familiar with the initial training and use? In Action Cycles 1-3, the CIO owned the technology and the business owner of the automated processes owned the workflow and content, and the Sponsorship Group continues. However, the questions regarding full product utilisation are outstanding. From experience I have seen many users only use a fraction of the functionality of the applications that they have available. Would organisations need to invest so heavily in ICT if all their application

functionality was known? Should these questions be answered by the business justification for alternate business applications? These questions were also raised by Stricker (2014) in her discussions of Knowledge Management. As organisations now have significantly more electronic information, knowledge management and its ability to assure competitiveness through the use of knowledge in an innovative way is vital, (Kurniawan, 2014). Asset and Knowledge management are extensive fields in the literature and further research would be required to respond to these questions.

5.4.6 Action Learning; Changes to Model

There was only one change made to the supporting models following this Action Cycle. This included the amplification of 'Programme Leadership' in the Team Resiliency and Stakeholder Partnership supporting models.

5.4.7 Action Learning; Changes to Actions

Sponsors were assigned for the participants involved in the Action Cycle. The programme managers started to move forward with the knowledge and learnings from the journey.

5.5 Cross Action Research Results and Evaluation

The fundamental purpose of the action research cycles and learning set was to evaluate the critical success factors outlined in the strategic IT-Enabling change programme model and its supporting models.

5.5.1 Action Cycles 1-3

There were three Action Cycles within one programme and one government department with a further Action Cycle within two programmes and two government departments.

At the conclusion of the first action research cycle, the pilot had gone live with one automated workflow and the document management system. Data from the previous document management system for the pilot area was migrated to the new system. There was also a massive manual clean-up of hard copy records across the organisation.

At the conclusion of the second Action Cycle, the pilot went live with a further two automated workflows and the department divisions began to go-live with the document management system.

At the conclusion of the third Action Cycle, the department began to go live with the three automated workflows and continued with the roll out of the document management system.

All three cycles of the study concluded that all the critical success factors included in the Strategic IT-Enabling Change Programme model were required, with the top four considered key to this IT-enabling Cultural Change Programme:

- Executive Sponsorship
- Stakeholder Partnership
- Team Resiliency
- Programme Leadership
- Quality
- Business Outcome
- Time
- Governance
- Cost

Following Action Cycle one, Stakeholder Partnership was considered to be the most critical success factor, followed by Team Resiliency, Executive Sponsorship, Programme Leadership, then Time, Quality and Business Outcome.

The second Action Cycle focus groups identified Stakeholder Partnership as the most common theme, followed by Team Resiliency, then Quality, Programme Leadership, Executive Sponsorship and Time. Governance and cost were only briefly mentioned as they were considered administrative functions.

At the conclusion of the third Action Cycle, Executive Sponsorship and Stakeholder Partnership were jointly considered to being the most critical success factors, closely followed by both Programme Leadership and Team Resiliency. These were followed by Business Outcome then Time.

The Executive Sponsorship in the first three cycles included a separate Sponsorship Group, that included the Programme Executive Sponsor, the business owner for the automated workflows, the technology owner of the system as well as key senior executive who were the representatives of the areas were going to be impacted by the change programme. There were a couple of business areas who had elected not to provide representation in the Sponsorship group, due to work pressures, however they did have representatives in the Stakeholder Advisory Groups. The Programme Executive Sponsor provided the linkage to the Governance structure for the meta-programme.

The Stakeholder Partnership critical success factor and supporting model, was transparent to stakeholders. As a result, there was a considerable amount of feedback in the journey of change and system development. This resulted in an extension to the supporting Stakeholder Partnership model, and a change of terminology from 'Stakeholder Interdependencies' to 'Stakeholder Partnership'. These changes were readily accepted by participants.

There were other items that were proffered by participants, such as communication, selection of technologies, testing, training, concept of operations. These activities are part of the Stakeholder Partnership supporting model and as such they were not included as critical success factors. If they had been included and coded with Stakeholder Partnership, then the critical success factor of Stakeholder Partnership would far outweigh any other in the third action research cycle.

Members from the Executive Sponsorship Group gained greater visibility with the business stakeholders when they became involved in the Realisation sessions, the Familiarisation sessions, and the awarding of competitions which were then reflected in the programme communications. These sessions were more prevalent in the latter stages of action research cycle two and the third action research cycle. Hence, it is plausible that the critical success factor of Executive Sponsorship rated higher following the third action research cycle.

The programme team were highly visible to the stakeholders during the whole journey. However, Team Resiliency was more apparent during the first two Action Research Cycles. It is plausible to

connect the first two cycles and Team Resiliency with the manual hard copy clean-up of records, which occurred during these cycles. The manual hard copy clean-up gave all team members exposure to all areas of the business and commenced the change. Many negative behaviours were experienced during this period for which team resiliency was required. In the second and third action research cycles the team were instrumental in their front-line support of the newly automated processes as well as the migration of electronic documents to the new system. Once again, these activities initiated change for the business stakeholders and the team required resiliency to counter negativity and continue to provide excellent customer service.

Programme leadership was seen to apply to various levels. It applied to the Executive Sponsorship Group and was referred to as executive leadership. It also applied to the programme director and was referred to as active and driven programme leadership. The term leadership was seen to lead from the front and sponsorship to lead from the rear. The executive leadership from the Sponsorship Group articulated the vision, ensured alignment to the organisational strategy and actively championed the programme. The sponsorship group had a shared understanding, were dynamic, and had a united front and commitment to delivery. The members had ownership of the system and business and therefore 'had skin in the game'.

The programme leadership was highly regarded and seen to support and guide the team in all aspects. The programme leadership kept all the moving parts aligned, made things happen transparently, and followed through any concerns to keep the programme moving. The programme leadership was described as adaptive, collaborative, energetic, authentic, and autocratic when required and communicative. Hence this leadership was referred to as driven programme leadership. The delivery within the timeframe was directly attributed to the programme leadership.

Programme Leadership was raised as a critical success factor following the first action research cycle. Many discussions were held with the participants and Doctoral Advisory Group about the inclusion of Programme Leadership. As a result of this feedback, Programme Leadership was amplified in the Team Resiliency model and is now included in the Stakeholder Partnership model. However, Programme Leadership continued to be one of the top four critical success factors throughout the action research. As a result, this has now been included in the Strategic IT-Enabling Change Programme Model.

5.5.2 Action Cycle 4

Action Cycle 4 had initially four departments which decreased over the period to two. One department was in the programme establishment phase and the other was in the midst of a technology rollout and later moved to the transitioning to operations of another.

The Action Cycle concluded that the key critical success factor was Executive Sponsorship. The programmes in the study did not have Sponsors, nor a governance structure and tried to initiate these. The result was that one programme stalled and the other could not get traction to provide familiarisation sessions run by the business. The latter programme continued to be deployed purely as a technology deployment without business involvement. This resulted in minimal uptake of the technology information sessions. At the conclusion of the Action Cycle, the first and final programmes managed to gain a sponsor and they began to move forward with their respective implementations.

5.5.3 Overall

The Strategic IT-Enabling Change Programme Model and its supporting models includes many of the critical success factors determined through this action research. The critical success factor that was not originally included in the Strategic IT-Enabling Change Programme Model is Programme Leadership. As Programme Leadership has been included in the top four critical success factors throughout the Action Research, this has been included in the final model.

The critical success factors, Time, Governance and Cost were not significant themes from the action research cycles. Yet this programme produced accelerated change and more was delivered within a shorter timeframe than anticipated by the sponsors. As a result, greater resourcing was applied to the transition and embedding of the change which assisted stakeholder adoption and partnership.

The critical success factor of Cost was referred to the least through all the action research. Given the cost of the IT failure rate, the lack of recognition or focus on this critical success factor is substantial. Is there a different approach to scope and budget establishment and iterative refinement that could be employed? Are benefits considered during prioritisation?

Throughout all the Action Cycles, the dominant theme was Stakeholder Partnership as it had a significant focus. The supporting models for Stakeholder Partnership include the holistic journey of change and systems implementation so this critical success factor is naturally more visible to all participants.

However, the critical success factor that traverses all of the action cycles and the action learning sets, is Executive Sponsorship. Without Executive Sponsorship, a bottom up approach can be taken but the time to gain traction is exacerbated and the risk is, that the programme stalls. This was exhibited in this research. For strategic and accelerated change, Executive Sponsorship is vital.

Overall the action research has shown that the key critical success factors for Strategic IT-Enabling Change Programmes include:

- Executive Sponsorship
- Stakeholder Partnership
- Programme Leadership
- Team Resiliency

This is supportive of the Strategic IT-Enabling Change Programme Model and its supporting models presented in Chapter 4 and Figures 4.1, page 56 to Figure 4.5, page 74.

5.6 Summarized Details of the Action Cycles

The summarized details of each of the Action Cycles are outlined in Table 5.3, page 143, and contains the inclusions of each Action Cycle and the dates of each cycle. It also contains the CSFs and phases of each of the Action Cycles and the details which guided the format of the sections of the Action Cycles. The phases are grouped according to each critical success factor and are not in chronological order. Although the phases are cyclical and had similar work processes, they elicited different problems and different thought patterns. Table 5.3, page 143, lists the different techniques for data collection for each cycle to generate the Action Research. In addition to the main literature review, each Action Cycle stimulated particular areas that required further literature review. The table lists the areas of literature that steered and shaped further review, action and understanding in each cycle. Armed with further knowledge the models were evaluated at the conclusion of each cycle and refined as appropriate. These refinements are also documented in the table.

Action Cycle	**CSFs and Supporting Model Components**	**Research Techniques**	**Literature related to the Action Cycle**	**Resultant CSF and Supporting Model changes**
ACTION CYCLE 1 Go Live/ Software Release for one business unit within one Department which included one automated workflow and document management system July 2013- May 2014	***Executive Sponsorship*** 1.Governance and Sponsorship ***Stakeholder Partnership*** 1. Contextualisation; Context of Operations. Problem Definition, Business Outcome 2.Cultural and Technology Alignment 3. Conceptualisation; stakeholder analysis and Concept of Operations, stakeholder approach 4.Business Requirements, Solution, (system and workflow) Design 5.Stakeholder Interdependencies Programme Schedule and	• Participant observation • Discussions • Action Learning Set • Meeting minutes and communications • Interviews (22) and transcription with key participants • Journal notes • Reflection	• Sponsorship vs Governance • Programme Leadership – Adaptive and Enabling Leadership and Administrative Leadership • Cultural Technology Alignment • Stakeholder Identification • Stakeholder Interdependency Programme Schedule • Change vs Delivery • Problem Definition • Team Resiliency	• Added in the Stakeholder Partnership supporting model, which is based on the industry standard 'V' model, the iterative nature of software design and testing and overlayed the IT-Enabling Change lifecycle

Action Cycle	CSFs and Supporting Model Components	Research Techniques	Literature related to the Action Cycle	Resultant CSF and Supporting Model changes
	Development 6.Socialisation; workflow prototype and approach validation and Development 7.Realisation; business preparation 8.Familiarisation; SME Functional Assurance 9.Early Adoption; Training, Testing, Go Live Celebration, 10.Operational Validation, Go Live Support 11.Next Generation ***Team Resiliency*** 1.Programme Identity and Positioning 2.Governance, Sponsorship & Communications 3.Action Learning 4.Active Conflict Management 5.Risk Management 6.Evolution			
ACTION CYCLE 2 Go Live/Software Release of two Automated	***Executive Sponsorship*** 1.Active Sponsorship ***Stakeholder Partnership*** 1.Solution Design; system	• Participant observation • Discussions • Action Learning Set • Meeting minutes and communications • Focus groups with key participants	• SDLC iterative design • Socialisation vs Familiarisation • Project Implementation Review	• Added in the Stakeholder interdependencies V model the iterative nature of the model • Added Realisation in the Stakeholder V model

Action Cycle	CSFs and Supporting Model Components	Research Techniques	Literature related to the Action Cycle	Resultant CSF and Supporting Model changes
Workflows in one business unit software release of Document Management across the Department Dec 2013 - July 2014	and workflow design 2.Socialisation; workflow prototypes and document folder structures and security 3.Realisation; BAU risk mitigation 4.Familiarisation; workflow and system, SME functional assurance 5.Stakeholder Adoption; Transition, Business Outcome, Go Live Support 6.Next Generation ***Team Resiliency*** 1.Action Learning 2.Evolution	(28) • Journal notes • Reflection •		
ACTION CYCLE 3 Go Live of three automated workflows across the Department June 2014 - Sept 2014	***Executive Sponsorship*** 1.Active Sponsorship ***Stakeholder Partnership*** 1.Familiarisation with system, Testing 2. Stakeholder Adoption; Training, Go Live Celebration, Transition, Support ***Team Resiliency*** 1.Action Learning 2.Evolution	• Participant observation • Discussions • Action Learning Set • Meeting minutes and communications • Interviews (12) and transcription with key participants • Journal notes • Reflection •	• Stakeholder Partnership • Contextualisation • Programme Leadership • Transition • Embedding Change	• Separated Sponsorship Group from Programme Board • Name of Stakeholder Interdependencies Critical Success Factor changed to Stakeholder Partnership • Extension of Stakeholder V model
ACTION CYCLE 4	***Executive Sponsorship***	• Participant observation	• Action Learning • Sponsorship and	• Programme Leadership added to

Action Cycle	CSFs and Supporting Model Components	Research Techniques	Literature related to the Action Cycle	Resultant CSF and Supporting Model changes
Action Learning with other state government departments Feb 2014 – March 2015	1.Sponsorship establishment ***Stakeholder Partnership*** 1.Action Learning Set	• Discussions • Action Learning Set • Meeting minutes and communications • Journal notes • Reflection •	Sponsors • Programme Management Competencies • Ongoing system ownership and knowledge management	Stakeholder Partnership V model

Table 5.3 Detailed Action Research Cycles

The programme or the Action Research cycles were not tightly designed in advance. As complex adaptive systems, programmes are iterative in nature and do tend to change and evolve. This programme was no exception. The art of programme management is the flexibility to continually adapt the programme, both from a delivery and resource perspective, while balancing all the critical success factors.

6. Final Model

As seen across the Action Research cycles, Programme Leadership is considered to be a critical success factor for this cultural IT-Enabling Change Programme. The inclusion of programme leadership as a critical success factor, has resulted in a structural and textual change to the Strategic IT-Enabling Change Programme Model.

The final model is shown in Figure 6.1, page 144.

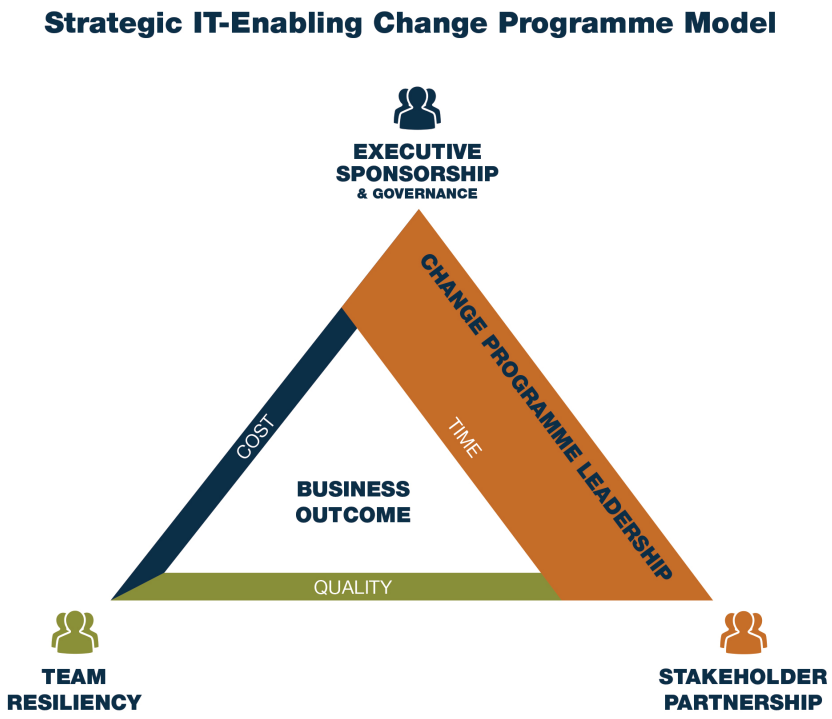


Figure 6.1 Strategic IT-Enabling Change Programme Model

All identified people related factors have now been incorporated into the Strategic Change Programme model, Figure 6.1, page 144.

The Strategic IT-Enabling Change Programme model, together with the supporting models, is shown in Figure 6.2, page 145. The supporting models provide guidance for the programme manager, to build the people related critical success factors. The Executive Sponsorship and Stakeholder Partnership supporting models were refined throughout the Action Research.

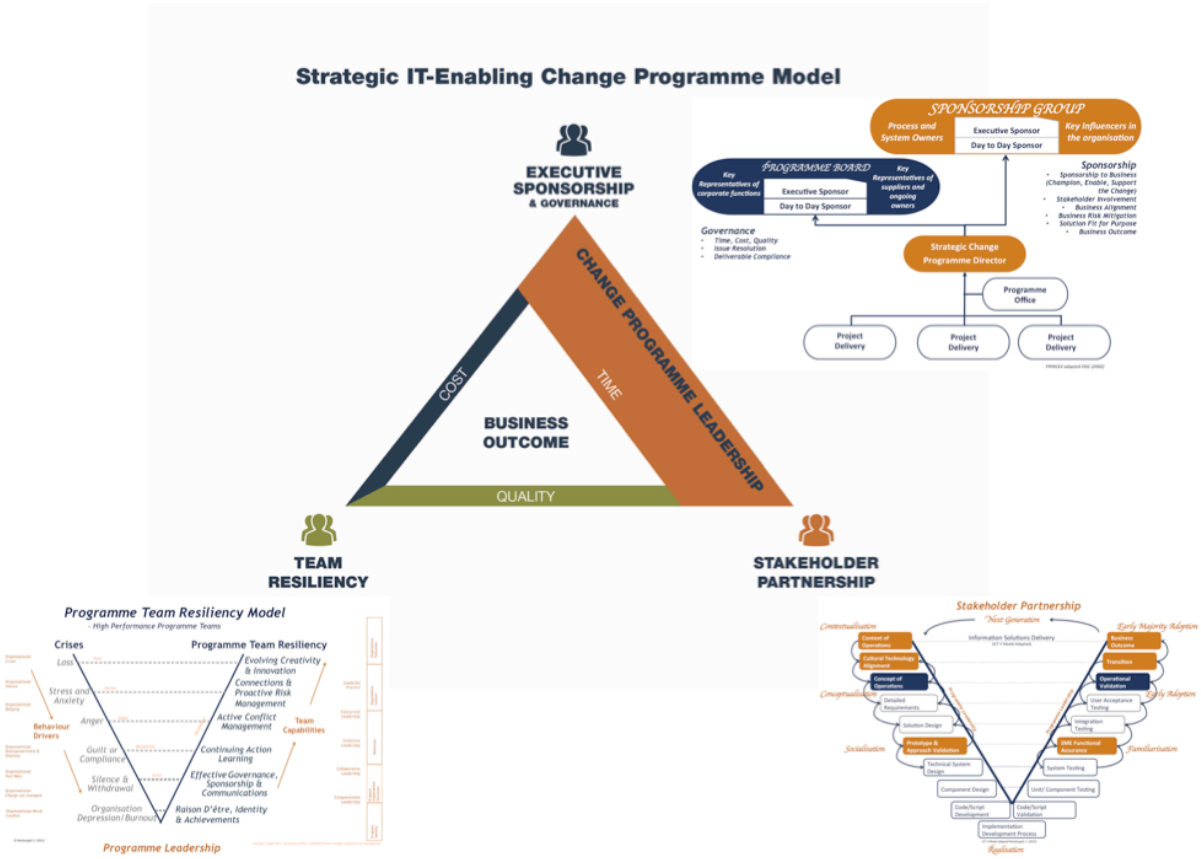


Figure 6.2 Strategic IT-Enabling Change Programme Model and Supporting Models

7. Discussion

7.1 People Related Factors as Measures

As outlined in the literature review, the UK Office of Government Commerce (OGC) (2005) summarised the top four factors of project failure as:

- Lack of alignment between the project and organisation's strategic priorities
- Lack of clear senior management, ownership and leadership
- Lack of effective engagement with stakeholders
- Lack of competency

To address these four factors of failure, three critical success factors were focused on in this action research; Executive Sponsorship, Stakeholder Partnership and Team Resiliency. These critical success factors were illustrated in a Strategic IT-Enabling Change Programme Model. The action in this research drew on the supporting models for the Strategic IT-Enabling Change Programme Model; Executive Sponsorship, Stakeholder Partnership and Team Resiliency.

The cultural IT-Enabling Change Programme in Action Cycles 1-3 was deemed to be a success by the participants involved in the reviews. Participants across Action Cycles 1-4 confirmed the criticality of the people related factors of Executive Sponsorship, Stakeholder Partnership and Team Resiliency as well as Programme Leadership.

As such the top four programme management people related critical success factors of Executive Sponsorship, Stakeholder Partnership, Change Programme Leadership and Team Resiliency have been reflected in the final Strategic IT-Enabling Change Model. These critical success factors all need to work together, and work with the critical success factors of time, cost and quality. The final Strategic IT-Enabling Change Programme model with supporting models is illustrated in Figure 6.2, page 145.

These factors or the themes of these factors have been discussed in the literature for over a decade. However, the combination of factors presented here is only recently emerging in the literature. Further given that people related factors have been recognised, but not focused on, and the IT project/programme failure rate has continued, this raises the criticality of these factors and the need to focus on them throughout delivery of IT-Enabling Change Programmes.

To gain a greater focus on these people related factors, given that organisations are driven by measurement, should these factors become IT-Enabling Change Programme measures of success throughout delivery?

7.2 The need for Change and System Development Integration

The Stakeholder Partnership Model combined an IT-Enabling Change lifecycle and system development lifecycle as it related to IT-Enabling Change. The alignment of the system development lifecycle, IT-Enabling Change lifecycle and the programme management lifecycle was included in Section 3.

The change models outlined in the literature review, Kotter (1996), Lewin (1951) and Anderson and Anderson (2001) in D'Ortenzio (2012), were compared with the IT-Enabling Change lifecycle in the Stakeholder Partnership critical success factor supporting model.

However, as Benjamin and Levinson (1993; p.23) stated, "IT-Enabling Change is somewhat different". This Action Research found that IT-Enabling Change requires greater emphasis and activities such as contextualisation, cultural and technology alignment, further activities within conceptualisation, socialisation of prototypes, realisation and risk mitigation and familiarisation sessions. These elements will provide the stakeholders with the assurance that they will end up with technology systems and practices that will support their business, their way of working and the desired culture which in turn supports stakeholder adoption.

As such, I extended the Stakeholder Partnership model with all the IT-Enabling Change activities to support an IT-Enabling Change programme. This action research therefore extends the change models by Kotter (1996), Lewin (1951) and Anderson and Anderson (2001) in D'Ortenzio (2012), and provides an IT-Enabling Change Lifecycle.

7.3 The criticality of the Sponsorship Group

Executive Sponsorship for programmes and projects is considered by the literature as the top driver for project success, PMI (2014).

The programme methodologies by OGC (2011) and PMI (2013) discuss a Programme Board or a Programme Governance Board. These governance bodies include the programme sponsor and ensure that there is alignment with the organisation strategic direction, that there is funding, reporting and control processes, issue escalation processes, the acceptance criteria, communications and endorsements. The Programme Board monitors progress and the phases of the programme. The OGC (2011) also discuss a Sponsoring Group, comprising senior managers and responsible for the alignment of the programme with the organisation strategic direction, the investment and business direction. The Sponsoring Group, OGC (2011) should provide top level endorsement and champion the implementation of new capabilities. This group may comprise executive or may be delegated to a portfolio board, (OGC, 2011).

This Action Research adapted these programme governance structures, roles and responsibilities and as such extends the existing methodologies. The Action Research had a Programme Board which reflected the roles and responsibilities of a Programme Board outlined by the OGC (2011) and PMI (2013). However, this Action Research created a separated Sponsorship Group to champion, support and enable the programme delivery.

The Sponsorship Group comprised the Programme Executive Sponsor, a day-to-day programme sponsor, and senior members of the organisation whose areas were going to be impacted the most. It included the business owner of the automated workflows and the owner of the system. All members were like minded individuals who had a stake in the business outcome, that is, they had 'skin in the game'. The Sponsorship Group provided executive leadership and were actively involved in the activities of the IT-Enabling Change lifecycle, refer to Table 4.2, page 72.

Key participants of this research, determined that without the Executive Sponsorship from this Sponsorship Group, and Executive Sponsorship from the Secretary, that the programme would not have been as successful, nor implemented within the accelerated timeframes. This would have had a flow on impact to the cultural change required to support the move to a new agile environment and to the whole programme delivery. All the critical success factors would have been impacted including; stakeholder partnership, the team, timeframes, quality and costs.

As such, the leadership of the Sponsorship Group was critical to success. The leadership created and provided by the Sponsorship Group was that of Enabling Leadership, which is drawn from Complex Leadership Theory, Uhl-Bien and Marion (2009) and used as a basis for the leadership within the programme. This is discussed further in programme leadership.

7.4 The transparency of Stakeholder Partnership

Stakeholder Partnership was the most transparent critical success factor to the programme participants. This was due to the involvement of the stakeholders in the programme lifecycle. Participants could see the change journey and areas of involvement when they saw the supporting Stakeholder Partnership model, which couples and extends the IT-Enabling Change lifecycle with the System Development Lifecycle (SDLC).

The designs of the automated workflows and system configuration within the Action Research, confirmed the action of adding the iterative cycles to the Stakeholder Partnership supporting model. The key revelation for the Stakeholder Partnership supporting model was, at a later stage in the programme, the discovery that the iterative cycles of verification and validation had been proposed by Winston Royce in (1969), (Forsberg, Mooz, Cotterman, 2005). These iterative cycles somehow

have been 'lost' from the system development lifecycle model over the subsequent decades with the lifecycle portraying a linear approach.

The identification of stakeholders to be involved in the journey of IT-Enabling Change, is also crucial to the success of the programme. However, it was not a transparent critical success factor in this Action Research. Stakeholders identified to be involved in the change programme, were those who would provide a contribution to the programme, those who were 'early adopters', who were open to change, who would provide good feedback, and those who were in touch with the organisation. They were informal leaders within the organisation, those who influenced others and whom others followed. They were the stakeholders who could look at technology and visualise how this IT-Enabling Change could and would be introduced and integrated into their own environment.

The stakeholders were selected to provide input to the context and concept of operations, robust business requirements and designs for the system and workflows, sound feedback on the configuration and prototypes, critical what-if acceptance testing, active participation in generating awareness across the organisation and operational validation. These activities ensure that the change supports the stakeholders and that the systems and practices are fit for purpose. It ensures that assumptions are not made that are detrimental to future operations.

Early adopters make up 13.5-15% of a market, (Moore, 2002; Jun, 2012). Within this Action Research, 13.5-15% equated to 61-68 staff. I had identified 94 staff who were actively included in the Stakeholder Advisory Group activities and there were 8 staff in the Sponsorship Group. Throughout all the workshops, active participation ranged between 60-80%. At the conclusion of the first quarter following implementation of the automated workflows, the adoption rate was estimated between 70%-85%. The stakeholder participation and adoption aligns with the technology or product adoption lifecycle, but with accelerated adoption as 84% is considered late majority adoption not early majority adoption.

7.5 Building Adaptive and Resilient Teams

The programme team was considered to be resilient according to the participants of the Action Research. It was acknowledged that the team encountered setbacks, but overall participants believed the team to bounce back from these setbacks and to be resilient. Participants also referred to the adaptability of the team, which drew on adaptive leadership. The team took the learnings from these setbacks, openly discussing them and seeking ideas for continual improvement and growth. This mindset generated further creativity and innovative solutions to problems, keeping the team positive. The positive culture of the team was then reflected in stakeholder engagement.

As cited by Burnard and Bhamra (2011), Holling (1973) determined that organisational resiliency was multidisciplinary and multidimensional. Further review of the literature revealed a focus on resiliency thinking, arising from Holling (1973), Gunderson(2000) and Scheffer (2009), Folke, Carpenter, Walker, Schefffer, Chapin and Rockstrom (2010). This was supported by Curtin and Parker (2013) who illustrated that resiliency thinking had generated new multidisciplinary approaches for the resolution of problems and that change was inescapable and unpredictable. Curtin and Parker (2013) went on to state that resiliency thinking needed to treat actions as things to be learnt from and to look at the bigger picture, the behaviours, and the innovation, not just the individual result. The action learning within the Team Resiliency supporting model aligns with this. The authors, Curtin and Parker (2013, p.917), linked resilient thinking to adaptive approaches of conservation and stated that "resiliency science and adaptive management were sister disciplines". Co-evolution was driven crises, learning and redesign Holling, Berkes and Folke (1998), in Curtin and Parker (2013). Folke, et al., (2010) considered persistence, adaptability and transformation to be part of resiliency and that adaptability enabled the capacity to learn and continue to develop but that it was transformation that then gave innovation. All these elements are part of the Team Resiliency supporting model.

The literature on resiliency thinking is supportive of the elements within the Team Resiliency model.

7.6 Cultivating Adaptive and Enabling Programme Leadership

Programme Leadership was reviewed initially to support the development of the critical success factors. However, Programme Leadership was considered by participants of this action research over the three action research cycles, to be a critical success factor.

My programme leadership in this Action Research was referred to as adaptive, collaborative, energetic, authentic, communicative and driven, which is more aligned with adaptive and enabling leadership outlined by Uhl-Bien and Marion (2009) and Uhl-Bien, Marion and McKelvey (2007). My programme leadership continually observed patterns and trends, events, interpretations of observations and designing interventions based on these, all of which are referred to as adaptive work, (Heifetz, Grashow and Linsky, 2009 in APSC, 2014). Heifetz, Kania and Kramer (2004) determined that adaptive leadership required the flexibility to deviate from the plan as learning takes place. The authors advocated to remain focused and progress the change journey, reframing and addressing the issues and mediating conflict on the way. My leadership of the programme reflected these actions.

Further, the Executive Leadership from the Sponsorship Group in the Action Research, was instrumental in articulating the vision, ensuring alignment to strategy, actively championing the

change, supporting the programme and facilitating the interaction and integration with the organisation. These are closely aligned to enabling leadership from complexity leadership theory (CLT), (Uhl-Bien, Marion and McKelvey, 2007). The Sponsorship Group enabled the adaptive leadership of the programme to succeed and build a resilient team as well as deliver an innovative outcome, (Higgs and Rowland, 2005). The Sponsorship Group provided leadership and therefore had the ability to sponsor the programme.

7.7 Recognising IT-Enabling Change Programmes as Complex Adaptive Systems

Burnes (2004) noted authors such as Stacey (2002) who were using complexity theories as a way to understand adapting, changing, dynamic and non-linear organisations. Organisations like systems also have a number of interacting actors and are seen to have complex and emergent change, (Burnes, 2004). Burnes (2004) in revisiting Lewin's work, pointed out that Lewin (1947) believed that a field, of which behaviour is a function, was continuously adapting and changing.

The Action Research was in a field of change. The Action Research was for the implementation of a cultural IT-Enabling Change Programme in an Australian State Government Department. The organisation underwent a restructure, changing business cycles, changing ministers and emerging business practices to operate in an agile environment with minimal reliance on paper.

The complexity of all the adapting and changing organisation required the programme to be adaptive and to provide an emergent solution, to remain aligned with the organisational changes. As such, IT-Enabling Change Programmes could be considered to be a complex adaptive system within an organisation.

7.8 Countering the IT-Enabling Change Programme/Project Failure Rate

At the outset of this research, Smith's (2003) statistic that only 19% of cultural change programmes were successful was sourced. This was further supported by Higgs and Rowland (2005) who found that only 30% of change initiatives were successful. As per the literature, IT has a stigma because of its high and continuing failure rate. In addition, it was established that the organisation had tried to do the cultural change twice in previous years and it had failed both times.

These statistics and history provided a degree of uncertainty for myself as a doctoral practitioner, even though the models and professional practice had delivered successfully in several programmes over the course of a decade.

However, following the first action cycle and delivery of a pilot, the programme began to be deemed successful by participants. The analogy of dropping a pebble into a pond and obtaining a ripple effect began to take hold, with the old adage 'success breeds success'. The implementation approach, which is part of the Stakeholder Partnership supporting model, was highly regarded by participants. Further, the action cycle reviews raised the awareness of the model and supporting models and other projects and programs began to embrace them. Overall the programme was considered to be highly successful and confirmed the critical success factors of the models and the processes to build them.

8.0 Research Limitations

There are several limitations of this research, each of which have been outlined below.

8.1 Balance of Action and Research

Davison, Martinsons and Ou (2012) outlined the challenge of the dual imperatives, one of action and the other of research, by McKay and Marshall (2001) resulting in two masters; the organisation and research. The Action Research drew on the literature continuously to reflect on the model and to explore changes. However, the implementation of an IT-Enabling Cultural Change is an extremely wide field and as such may have not discovered areas of literature that would have added further relevance to the research.

8.2 Transferability

Participants believed that these models could be transferrable and used by other practitioners in other contexts to aid them to deliver successfully. Other contexts included Government Departments and business programs. Where these programs may not include IT-Enablement, the only area believed not relevant was code development.

However, although participants agreed that these models would be transferable to other programmes and organisations, there may have been context dependency on the use of the models and critical success factors on the organisation and stakeholders involved. To aid transferability, the research related the material to existing bodies of knowledge such as programme management, change management and the system development lifecycle and tried to generalise the findings, (Kock, 2007).

8.3 Multi-disciplined

The disciplines of programme and project management, change management and software development were used to plan and guide the action of this programme. These disciplines are interdependent and in themselves span multiple disciplines. As such each of these disciplines are all very large and may have caused confusion in the research.

8.4 Role Duality Biases

There was role duality, one as a researcher and one as the leader of action. As an insider, I could critically observe and have access to resources and information. I also had the trust of the organisation. However, being an insider may have introduced unintentional biases and impartiality, (Baskerville and Wood-Harper, 1996, in Kock, 2007).

8.5 Sample Size and Timing

The first is that the action research had three cycles within one IT-Enabling Cultural Change Programme within one organisation of 450 staff. Each cycle was planned around the go-live of a software release and 62 staff participated in the cycle reviews. A programme such as this has a limitation on timing as the programme was closed and resources moved to other organisations. Action Learning was used in two other departments, however the fullness of the models could not be trialled by other organisations within the given timeframes. Overall, there were three departments involved in this study, however this represents a small sample size.

9.0 Implications to Practice and Further Research

9.1 Adoption of Models

An evaluation of action and models in this Action research was conducted at the conclusion of each action cycle. Through these cyclical refinements, the study has built emergent confidence in practice and developed actionable and generalisable knowledge.

The Strategic IT-Enabling Change Programme Model critical success factors and the supporting models have resonated with practice, and are being adopted by one of the State Government Departments who were involved in the study. Further discussion is scheduled with the second State Government Department. Given that there was considerable government upheaval and that the programmes were not seamless, this is a major achievement for this research.

The adoption of these models supports the plausibility of the model and the findings within this Action Research.

9.2 Programme Management competencies

The project performance standards published by Global Alliance Project Performance Standards (GAPPS) in 2001, recognised Leadership, Manage Organisational Change and Facilitate Stakeholder Engagement as three of eight units of competency for programme managers.

The leadership defined by GAPPS, refers to motivating and inspiring the team and organisation to achieve the programme benefits and includes the elements of promoting the vision, building trust, programme confidence and social responsibility, and developing staff potential while supporting a learning environment. The competency of managing organisational change refers to cultural and behavioural change and includes the elements of change advocacy, the change approach and the evaluation of effectiveness. The competency of Facilitate Stakeholder Engagement referred to working with stakeholders and includes communication and stakeholder commitment.

These combined competencies form those associated with change implementation outlined by Higgs and Rowland (2000) in Crawford, Aitken and Hassner-Nahmias (2014). Hence there appears to be synergy between programme management and change implementation.

However, although the literature and practice of programme leadership in the IT-Enabling Change are aligned with these definitions and units of competency, the practice in this action research went further to align with adaptive and enabling leadership from complexity leadership theory (CLT), (Uhl-Bien, Marion and McKelvey, 2007).

As such, the author proposes that adaptive and enabling leadership be included as competencies for programme managers. This would have implications to any of the project programme and portfolio management certification and assessment frameworks, such as the Individual Competency Baselines (ICB) from the International Project Management Association. It is understood at the time of writing that the new ICB4 framework will have greater focus on the people aspects and leadership aspects.

9.3 An Integrated Approach

As seen throughout this research, it is recognised that IT-Enabling Change Programmes require an integrated approach for IT, Change and Programme Management. An integrated approach will require further executive competencies in the management of IT as well as the management of change and the management of programmes.

9.4 Stakeholder Partnership - Transition and Early Majority Adoption

Transition has been shown to be key to the early majority adoption of a new system and the adoption of change to practices. Within the field of marketing, there is a term that is used called "Crossing the Chasm" Moore (2002). Moore (2002' p.19) considers this "the most formidable period in the Technology Adoption lifecycle….as it typically goes unrecognised". Relating this to programmes and projects, there appears to be a gap at the conclusion of a programme or project following the handover to operations, where the united front of the programme team is no longer visible to the stakeholders. Typically the early adopter stakeholders are involved in user acceptance testing and training, and the system is deployed and handed to production and the operations team. The programme team then steps back and the programme is closed. The operations team steps in to support and maintain the new system and practices. However, it is at this juncture where there is a chasm between early adopters and early majority adoption. This period is critical time for change implementation.

9.5 Stakeholder Partnership – Stakeholder Identification

As outlined the literature on stakeholder identification, primarily focuses on the criteria of impact, interest, influence, and power. Having the right stakeholders involved in an IT-Enabling Change programme can influence the acceptance and adoption of the change and the systems. Having the right stakeholders involved will determine if the system is fit for purpose.

This research identified that it was imperative to involve stakeholders who could contribute to the requirements and design of the change and systems, those who were early adopters. Further research is required to ascertain if the characteristics and traits of early adopters are those of

stakeholders who can greatly contribute to IT-Enabling Change Programmes. This has implications to programme and project methodologies.

9.6 Stakeholder Partnership - Business Contextualisation

The contextualisation phase as incorporated in the Stakeholder Partnership supporting model is considered critical to the success of a change programme. This begins with understanding the problem, its complexities and its context prior to the creation of a solution, (Forsberg, Mooz & Cotterman, 2005). Critical understanding of the context then supports the conceptual design of the concept of operations for the future environment. The use of SSM for the exploration of the problem situation was used in this Action Research, (Checkland, 2000). Could SSM be used as a focal theory for IT-enabling change programmes? This would require further research.

9.7 Stakeholder Partnership - Business Requirements Management

The management of business requirements focuses on the containment of scope and the minimisation of changes to requirements, however as illustrated in Forsberg, Mooz & Cotterman (2005) 27% requirements will naturally change over the period. Given that IT-enabling change programs and projects are complex adaptive systems, the stakeholder business requirements will change over the course of delivery, to remain aligned with the changes in business. Further research is required to review the current methods of requirements management to cater for the adaptivity of the environment.

9.8 Team Resiliency

A resilient team is needed to implement change as the team encounters negative behaviours. We have also seen through this research that adaptive leadership is needed to lead a change programme. There is a considerable amount of literature on resiliency and positive psychology, however, the literature primarily focuses on the individual rather than team. Taking Pauchant and Mitroff's statement (1988 p. 54), "culture is to an organisation what personality is to an individual" as a base premise, how much of the literature on organisation and team resiliency transferable to individuals and vice versa? Resiliency science, resiliency thinking and adaptive management are sister disciplines, however what degree of connection is there between resiliency and adaptive leadership, (Curtin and Parker, 2014; Heifetz and Linksy, 2002)? These questions would require further research.

9.9 Programme Management Methodologies

This study found that there was an integrated approach for the implementation of strategic IT-Enabling Change Programmes was lacking. Further, that there were minimal models to clearly guide the practitioner in the delivery of change and IT. As such the supporting models for the people related factors evaluated in this study provide such a guide. However, to enable further usage, the methodologies for Programme Management would need to be adapted to incorporate these models and aspects found in this study.

10. Conclusion

The Strategic IT-Enabling Change Programme Model and its supporting models of Sponsorship, Stakeholder Partnership and Team Resiliency were evaluated, refined and validated throughout the research. The research aligns and integrates the change, system and program lifecycles and articulates the areas that extend the existing literature. The study clearly delineates Sponsorship and Governance, and outlines the models to build stakeholder partnership and team resiliency, and applies complexity leadership theory to the governance organizational structure of a programme. These models provide clear critical success factors and categories for the plethora of identified causes of IT project/programme failure.

This extensive study highlights the criticality of programme leadership and the people related success factors of Executive Sponsorship, Stakeholder Partnership and Team Resiliency and the need to take a more strategic and integrated approach for the successful delivery of IT-Enabling Change Programmes. Throughout the study the primary critical success factor was Executive Sponsorship, however the cultural change programme found Stakeholder Partnership to be as critical as Executive Sponsorship in the third action cycle.

The Programme Leadership utilised in the cultural IT-Enabling Change Programme, was based on the three styles of Leadership in Complexity Leadership Theory (CLT), (Uhl-Bien and Marion, 2009). Adaptive Leadership was used for the leadership of the team and building Team Resiliency. While resiliency thinking and adaptive management are sister disciplines, (Curtin and Parker, 2013), this study highlighted that team resiliency formed the basis of adaptive leadership. Enabling Leadership was used as a basis of understanding and to build the leadership of the Sponsorship Group and it was acknowledged throughout all the IT-Enabling Programmes that without Executive Sponsorship a programme will not succeed.

Stakeholder Partnership relies on enabling leadership to facilitate, transition and champion the new capabilities, into the administrative leadership of the organisation. The adoption of the innovation and change is reliant on all three styles of programme leadership. This has implications for practitioners, which is supported by recent research by PMI (2015) that identified that leadership capabilities are needed to enhance technical capabilities for successful projects and programmes.

These people related factors and the combination thereof, need to be brought into focus and applied in practice. Recent studies are supportive of the focus on people related factors of this model, however as seen throughout the study there has been differing nomenclature and no agreed position in practice or the literature on these factors. There were thoughts that these factors are

context dependent, however this study illustrated the transferability of the people related factors within the models evaluated. In practice to date, there is lack of adoption of people related factors and minimal methods and models to support an integrated approach.

This study provides practical models that were evaluated during several cycles of action research, and as such provide guidance to practitioners within this field. The information contained in this thesis therefore makes a significant contribution to the professional knowledge of the delivery of Strategic IT-Enabling Change Programmes and provides a clear pathway for professionals to build on.

This study countered the top four factors of failure outlined by the OGC (2005) and the successful cultural change countered the 81% success rate of culture IT-Enabling Change Programmes, Smith (2003). It is believed that the adoption and use of the model and supporting models within this study will enable other practitioners to also counter the IT failure rate.

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Appendix A

Detailed attention was given to quantitative research in the fields of research outlined in Chapter 2, to develop the qualitative semi-structured interviews used within the Action Research, to evaluate and confirm the people related factors within an IT-Enabling Change Programme through inductive analysis.

The questions for the interviews and focus groups following each Action Cycle were as follows:

Action Cycle 1 Interview Questions:

Interviewees:
Programme team members
Programme governance members
Sponsorship group members (Executive)
Key stakeholders

Only 19% of cultural and IT programmes are successful.

1. Can you describe the programme? How is the program experienced by various stakeholders?
2. From your perspective has this cultural and IT change programme been successful? Were there any inhibitors to the success of the programme?
3. Can you tell me about the factors that contributed to the success of this programme?
4. What do you believe the most significant factors were to the success of this programme? Can you expand on each? How do these factors compare to other programmes that have been run in the organisation?
5. Would you agree that executive sponsorship, stakeholder interdependencies and team resiliency were significant factors?
6. How would you rate the importance and performance of each of these factors? (Marketing effectiveness based question)
7. Which parts of the program have worked well?
8. Do you have any specific areas of concern?
9. What suggestions would you have to address your concerns? What areas would you change?
10. Would these models be repeatable in other cultural change and IT programmes? What would be needed for them to be repeatable?
11. Would these models be repeatable in any other change and IT programmes?
12. You have seen me use a specific approach (based on these models) in this programme. Have you observed a contribution from the use of these models to this programme and has this been positive? Can you describe the contribution? (Marketing effectiveness based question)
13. Did the programme continue to pursue its intended goals or did it change to pursue different ones? (Team Resiliency GRIT-S effectiveness, Duckworth 2013)
14. Did the programme maintain the focus and interest of the team, sponsorship group and stakeholders? (Team Resiliency GRIT-S effectiveness, Duckworth 2013)
15. Did the programme team encounter setbacks? Did they bounce back from adversity? (Team Resiliency GRIT-S effectiveness, Duckworth 2013)

16. Are there any other insights that we have not covered that would provide learning for future programmes?

Were there any specific factors relating to:

a. Executive Sponsorship
    i. Do you think there was active involvement by the sponsorship group and stakeholders? What would the outcome have been if the sponsorship group had not been as active?
    ii. What would the impact to the programme have been if the sponsorship group had not been as active?
    iii. Do you think that the executive sponsorship exhibited on this programme was a major contributor to its success? How was this exhibited?
    iv. How did the sponsorship group differ to the governance group? Can you describe the differences?
    v. How did the sponsorship group compare with governance structures you may have been involved with before?
    vi. From your experience with this sponsorship group, would you advocate in the future that a sponsorship group be separate to the governance group?
    vii. Do you believe that the sponsorship group aided alignment to the business strategy through the delivery journey? Can you expand on this?
    viii. Can you tell me about the understanding by the sponsorship group of the outcome, and its impact to the business and its urgency
    ix. Do you think the sponsorship group facilitated access for the programme to the business to the degree needed by the programme e.g. Change for pilot?
    x. Executive sponsorship has been ranked as the number one cause of failure for a change programme. Would you agree with this statement? What competencies did the sponsorship group utilise the most?
    Additional relevant questions:
    xi. Were the business owners, the technology owner and the executive in the Sponsorship Group? Did they provide drive and energy to the programme?
    xii. Was there increased level of collaboration between partners – was there active liaison with the business unit leaders and staff? (Reisman, Gienapp, & Stachowiak, 2007)
    xiii. Was there an increase in the number of partners supporting the programme? (Reisman, Gienapp, & Stachowiak, 2007)
    xiv. Was information about the programme shared and communicated across the organization? (Reisman, Gienapp, & Stachowiak, 2007)
    xv. Was this programme included in staff meetings? (Reisman, Gienapp, & Stachowiak, 2007)
    xvi. Were there regular sponsorship meetings? (Reisman, Gienapp, & Stachowiak, 2007)
    xvii. Was there increased visibility of the programme through communication and involvement? (Reisman, Gienapp, & Stachowiak, 2007)
    xviii. What was the adoption of the innovation? (Reisman, Gienapp, & Stachowiak, 2007)
    xix. Did the Sponsorship Group ensure delivery was fit for purpose?
    xx. Did the Sponsorship Group unblock issues and areas of resistance?

xxi. Was there commitment to the schedule by the Sponsorship Group?
xxii. Was there validation by the Sponsorship Group of all business related programme activities?
xxiii. Did the sponsorship group actively champion the programme?
xxiv. Did the Sponsorship Group ensure the programme delivery was aligned with the business cycles?
xxv. Were the sponsorship group involved in executive and staff familiarization events?

b. Team resiliency
   i. Was there a clear identity of the programme and clear objectives? How was this apparent?
   ii. Do you think there was greater inclusiveness of this team compared to other programme teams you may have worked on?
   iii. Did you observe that the team had greater participation than perhaps other programmes in which you have worked? (no time off)
   iv. How would you gauge the reliability and commitment of the team to delivery?
   v. Would you describe the team as being diligent in their approach? (Team Resiliency GRIT-S effectiveness, Duckworth 2013)
   vi. Was the team hard working? Was there follow-through? (Team Resiliency GRIT-S effectiveness, Duckworth 2013) How did this compare to other programmes/projects you have been involved in?
   vii. Did you perceive that there was much rework in the team? How would you gauge the quality of deliverables?
   viii. Can you tell me how programme problems in the team were handled? Were they openly and thoughtfully discussed? (trust)
   ix. Was there clear governance processes in place in which the programme operated? Did they support the programme?
   x. Do you believe that there was clarity of the individual's roles and responsibilities within the programme?
   xi. The programme had a sponsorship group. How did the team feel supported by this group?
   xii. Do you think that there was transparency, frequency and bidirectional communication at all levels? Was this transparency greater than other programmes? Do you think it was adequate for this programme? (Stakeholder effectiveness scale Fisher, Maltz and Jaworski 1997)
   xiii. Did you and the programme team learn from the activities within this programme? How did this compare to other programmes?
   xiv. Were your colleagues open to your ideas and others ideas?
   xv. Was there the process of continuous inquiry and learning (Team Risk and Resiliency GRIT-S effectiveness, Duckworth 2013)
   xvi. Do you perceive that the team's focus was more on risk rather than issues?
   xvii. Change programmes always invoke resistance and conflict. Was there active conflict management on the programme?
   xviii. Can you describe the setbacks that the programme overcame? (Team Resiliency GRIT-S effectiveness, Duckworth 2013)

xix. Were the team innovative in their approach? Did the programme team have a growth mind-set?
xx. When was the programme delivered? Did the delivery achieve a goal that was conceived many years ago? (Team Resiliency GRIT-S effectiveness, Duckworth 2013)

c. Stakeholder Partnership
   i. The programme tried to include active early adopters. Do you think the stakeholders who participated were active early adopters?
   ii. The programme used socialisation sessions and familiarisation sessions with the various stakeholder groups. How did this provide valuable input to the programme as well as to the stakeholders? What were your observations?
   iii. Did you observe active involvement from participating stakeholders in an iterative design process with this stakeholder engagement approach?
   iv. How much did this stakeholder engagement approach contribute to the success of the programme? What would have happened if there had not been this approach?
   v. Was there a good understanding by the stakeholders of the new workflows in the system? How was this displayed?
   vi. Do you believe that the participating stakeholders had an understanding of the business impact on the implementation? When there were revisions in the design and delivery that altered the known business impacts, were these communicated to the business?
   vii. How much did the delivery of this programme depend on other suppliers and stakeholders? (Stakeholder effectiveness scale Fisher, Maltz and Jaworski 1997)
   viii. How often did the program communicate with these suppliers and stakeholders? (Stakeholder effectiveness scale Fisher, Maltz and Jaworski 1997)
   ix. To what extent did the programme have an effective working relationship with the suppliers and stakeholders? (Stakeholder effectiveness scale Fisher, Maltz and Jaworski 1997)
   x. Did the suppliers carry our responsibilities and commitments to the programme? (Stakeholder effectiveness scale Fisher, Maltz and Jaworski 1997)
   xi. Was the relationship productive and worth the time and effort spent on developing and maintaining the relationship? (Stakeholder effectiveness scale Fisher, Maltz and Jaworski 1997)
   xii. Did the interdependencies schedules provide a clear understanding to the team and stakeholders of what needed to be delivered when and by who?
   xiii. Were these interdependencies schedules clearer than a standard Gantt? Would you use this type of schedule again and when would you use a Gantt?
   xiv. Do you think these schedules contributed to keeping the programme on track and within tolerances? How did they provide transparency of movement?
   xv. What would have happened if the stakeholders had not had these interdependency schedules?

Post Action Cycle 2 Focus Group Questions:

Focus Group Participants:
Programme team members
Programme governance members
Sponsorship group members (Executive)
Key stakeholders

1. Sponsorship / Leadership

Can you explain your role as a participant in the programme, and as a stakeholder?

2. Communications:

How have you been communicated with in this programme on its impact to your business? What has worked / hasn't worked / should be changed

How effective has staff communication been? What has worked / hasn't worked / should be changed

How has the programme kept you informed of project progress? What has worked / hasn't worked / should be changed

3. Governance:

Is the decision making process clear? Are the roles within the governance body and programme clearly defined?

What is your perspective of the management and performance of the 3rd party suppliers?

Has the expertise that you have needed for the success of this initiative been available in a timely manner?

Are you satisfied with the manner in which risks and issues have been identified and managed?

4. Business case:

In this release, what is your understanding of how this meets the objectives of the original business case? How have you reached your conclusion?

5. Change management:

How have staff been engaged in the programme? What has worked / hasn't worked / should be changed

What is your assessment of the engagement of staff in the programme?

6. Change:

How do you feel scope or requirements change has been handled in the programme processes?

How do you feel the scope being delivered meets your business needs? If not, what are the key requirements or areas of scope that are missing?

7. Readiness:

What is your understanding of the readiness of the system?

What is your assessment of the readiness of staff to use the system? What if anything is missing?

What is your definition of success for this first rollout?

Specifically on training, what was your expectation of the scope of training, and how has delivery met that expectation?

8. Go-live criteria:

How does the go live criteria fit your expectations of the readiness of the system?

9. Post Implementation:

What is your understanding of the readiness of the support processes?

Are the issue resolution and escalation processes clear and understood?

Do you have clear contingency options for significant system issues after it has gone live?

Any other areas that need to be covered?

Post Action Cycle 3 Interview Questions:

Interviewees:
Programme team members
Programme governance members
Sponsorship group members (Executive)
Key stakeholders

1. From your perspective has this cultural and IT change programme brought about change in the organisation and following the final go live was it deemed to be successful? Has there been considerable uptake of the system?
2. Would the following attributes describe the programme; it incorporated change, there were unpredictable crises, it was complex and had many interdependencies, it was not linear but multidimensional, and required adaptability?
3. What in your view, are the key factors and actions that have contributed to the success of the programme in Treasury? Can you expand on each?
   Previous factors and actions identified as contributing to success included; the sponsorship group, programme team and resiliency, programme leadership, quality, selection of technologies, timeframes, communications, stakeholder involvement and collaboration, the deployment approach and being a business focused project. Are they the same as previous factors outlined in your response to number 2?
4. Overall, have there been any inhibitors to the success of the programme?
5. Were there any significant changes to actions taken in the last transition and deployment?
6. In reflection, do you think that there were there any key repeated suggestions that were not enacted in the delivery? What were they?
7. In the model, I have altered the term 'Stakeholder Independencies' to 'Stakeholder Partnership'. Would you agree that the extension of a Project model's time, cost, quality, and governance with a Programme model of Executive Sponsorship, Team Resiliency and Stakeholder Partnership and Business Outcome, is still key to successful change programmes?
8. In the models, I have expanded the Stakeholder Partnership ICT V model with two additional levels in the V model; Context of Operations with a counterpart of Business Outcome, and Cultural Technology Alignment with a counterpart of Transition. The next level down is where the V model normally starts with the Concept of Operations with a counterpart of Business Validation. Would you agree with these extensions and why?
9. In the models, I have overlaid the Stakeholder Partnership ICT V model with the change journey of Contextualisation, Conceptualisation, Socialisation, Realisation, Familiarisation, Early Adoption and Early Majority Adoption. In reflection of the change cycles of the go live events, did these change activities become transparent to the change journey of the programme?
10. Hypothetically, if this programme had focused only on time, cost and quality without the people dimensions of stakeholder partnership, executive sponsorship and team resiliency, do you think this programme would have become a statistic? What would be your key messages for future programmes?

Appendix B

The Terms of Reference endeavoured to delineate between Sponsorship and Governance, to aid the understanding of those involved in the Sponsorship Group and those involved in the Programme Board.

The Terms of Reference was a complete document and agreed by the parties involved. This has been anonymised for inclusion.

Sponsorship Group
Terms of Reference
<NAME of> Programme/Project

<Date>

Purpose of Document

The purpose of this document is to:

- Outline the sponsorship arrangements for the Business Information Management Challenge program;
- Identify the potential key stakeholders of the programme and their responsibilities and accountabilities;
- Document their roles and responsibilities to be followed on the program; and
- Outline the overall stakeholder engagement in the above programme of works.

The identification of the programme's key stakeholders, their responsibilities and accountabilities between them throughout a programme's life cycle in an effective governance structure is critical to the delivery of a successful programme.

Programme Overview

Programme Title.

Programme Governance & Sponsorship

The following are important to ensure effective programmes:

- Governance and sponsorship structures, roles and responsibilities, clearly defined and assigned;
- Transparency of the governance and sponsorship structure;
- Appropriate representation of key programme stakeholders; and

- Regular updates of the programme's progress as outlined in the Programme Plan, as well as key risks and issues for the programme.

The Governance and Sponsorship Structure adopted for this Programme is outlined in Figure 1 below.

Figure 1: Sponsorship Structure for the Programme

Sponsorship Group Role

The Sponsorship Group represents the interests of the change, defining the direction, strategic alignment to the business and enabling the programme to achieve the desired objectives. The Sponsorship Group provides sponsorship that means continuing executive commitment to promoting and supporting the changes introduced by the change and championing the new capabilities and benefits delivered by the change. The Sponsorship Group establishes the values and behaviours required by the change effort to ensure staff motivation, promotion of team-working, empowerment at all levels, encouragement of initiatives and recognition of appropriate risk taking.

The Sponsorship Group represents at senior managerial level the interests of the business and the customers and is the authority which guides the strategic and implementation aspects of the programme to meet programme outcomes/objectives.

The Sponsorship Group has overall accountability for the change for ensuring that it meets its objectives and realises the benefits, and ensuring the interfaces with stakeholders are effective. It is responsible for assurance that the programme delivers quality programme outcomes as detailed in the Business Case. The Sponsorship Group is responsible for ensuring that programme outcomes are aligned with <Department> and departmental objectives, and are linked to other relevant Department programmes and activities. The Sponsorship Group is an advisory body for the programme and approves changes to the programme which are outside the delegation of the Programme Manager.

The role and authority of the Sponsorship Group is to:

- Champion the programme and implementation of new capability
- Ensure continuing alignment of the programme to the organisation's strategic direction
- Provide guidance for the implementation approach of the programme to achieve the business outcomes/objectives
- Enable and facilitate the delivery of change
- Provide overall strategic guidance and direction for the programme
- Provide leadership by example for the change
- Monitor the progress of the programme against strategic objectives
- Identify and monitor strategic business risks and issues relating to the business and the programme
- Commitment and endorsement of the programme at executive level, for communications and events
- Communicate information about the programme to stakeholder groups and resolve stakeholder issues
- Provide those people directly involved in the programme with guidance on programme business issues
- Resolve any strategic and directional issues associated with design, construction and/or operational requirements related to the delivery of the programme
- Assure and endorse the programme major deliverables and ensure that they are fit for purpose

- Ensure the programme's scope aligns with the requirements of the stakeholder groups and endorse any changes in scope
- Ensure effort and expenditure are appropriate to stakeholder expectations
- Identify any business issues that have major implications for the programme
- Reconcile differences in opinion and approach, and resolve disputes arising from them
- Take on responsibility for any whole-of-government issues associated with the programme
- Ensure that all parties are discharging their relevant responsibilities
- Provide commitment to the schedule
- Gain commitment from the programme team to the schedule
- Ensure the integrity of benefit profiles and realisation plan
- Review and endorse any changes in scope;
- Represent the interests of the organisation and the users;
- Provide guidance for the implementation and operational aspects of the works to meet outcomes/objectives;
- Resolve any issues associated with design, construction and/or operational requirements related to the delivery of the programme;
- Monitor the programme's progress and risk mitigation plans

Programme Board

The Programme Board, is responsible for managing, planning and controlling the programme in a manner reflective of the corporate organisation, OGC (2011).

The Programme Board, is responsible for the delivery and performance of the programme and ensuring that it delivers and achieves its goals. The Programme Board supports the authority and control over the programme as a whole and ensures that the programme delivers within its defined boundaries of cost, adoption and realisation of benefits, OGC (2011).

The Programme Board provides support to address and resolve risks, issues and dependencies. In addition it ensures that there is enough funding and resources for delivery, PMI (2013). The Programme Board approves the deliverables of a programme and ensures the compliance to reporting and control processes, and organisational policies and procedures, PMI (2013).

The role of the Programme Board is to:

- Provide programme approval, endorsement and initiation
- Ensure programme funding and success criteria
- Approve programme approach and plans
- Authorise, monitor and oversee programme progress
- Define the acceptable risk profile and risk thresholds
- Ensure the programme delivers within cost, time, scope, benefits
- Resolve strategic and directional issues between projects to ensure progress of the programme
- Provide assurance for operational stability and effectiveness during delivery
- Support the SRO and take ownership for stakeholder engagement within own area of the organisation
- Support the SRO and provide business change managers from the areas affected by the change
- Ensure programme compliance with reporting and control processes
- Ensure that there is an effective issue and escalation process

- Establishment of minimal acceptance criteria for success and the communication and endorsement of this
- Ensure that there are appropriate governance meetings and activities, such as meetings, reviews and health checks
- Provide advice and direction to the Programme Director/Manager, as required
- Resolve dependencies and any issues with other programmes, projects or operational work
- Approval of the major deliverables, and changes to scope
- Ensure resources are available for planning and delivery within the programme
- Ensure business continues to operate effectively during the period of change
- Approve recommendation for programme closure

Status Reporting to the Sponsorship Group

The Programme Director is responsible for preparing the update for the programme for the Sponsorship Group to review.

Status reports to the Sponsorship Group will cover the following areas:

- Programme Status;
- Programme Achievements;
- Programme Change Activities;
- Programme Interdependencies (with stakeholders including suppliers);
- Programme Business Risks;

Sponsorship Group Meetings

The Sponsorship Group meets regularly throughout the course of a programme. These meetings may cover the following agenda:

- Apologies
- Minutes from last meeting
- Matters arising from minutes
- Programme Update
- Stakeholder Engagement (Roles, Nominations, Engagement, Incentives, Communications, Socialisation and Familiarisation Events, Training)
- Technology Overviews (Design, Functions, Usability)
- Organisational Policies, Business Rules
- Key Business Risks
- Change Control
- Deliverable Assurance
- Updates from Process Owners
- Updates from Business Unit Representatives
- Plans for the next meeting

Status Reporting to the Programme Board

The Programme Director is responsible for preparing the update for the programme for the Programme Board to review.

Status reports to the Programme Board will cover the following areas:

- Programme Status;
- Programme Achievements;
- Programme Schedule;
- Programme Financials;
- Programme Quality;
- Programme Issues and Risks;
- Programme dependencies;

ROLE Identification

Most major programmes involve multiple stakeholders, each with their own interests, role and responsibilities. Some interests are shared but others may be in conflict with others or competing for limited resources. The clear identification and delineation of roles and responsibility among key stakeholders and communication of this information will assist each key stakeholder to fulfil their obligations more effectively.

The following sections discusses stakeholders, accountabilities, responsibilities, knowledge and experience required of the role, as well as identifying likely candidate(s) for the role.

Stakeholder Advisory Groups

The Stakeholder Advisory groups provide consensus among groups of identified stakeholders. The Stakeholder Advisory Groups also provide a closed feedback loop between the programme and the business and can be drawn on for various activities, such as the redesign for a process. These groups actively support the programme.

- Responsible for the delivery of the programme outputs to the required standard and quality and within specified parameters of time and cost.
- Provide advice on stakeholder requirements.
- Provide the consensus of the end user's needs.
- Provide views on scope priorities, business impacts and technical standards.
- Inform the programme on issues pertaining to the programme outputs and impacts on programme delivery.
- Inform the programme on operational issues arising that may impact on programme delivery.
- Inform the programme of service improvement opportunities.
- Check clarity and feasibility of programme scope and timelines.
- Ensure staff involvement (as required).

The Stakeholder Advisory Groups envisaged for this programme include <Groups and purpose>.

Reference Groups

The Reference groups consist of a collection of people with the requisite skills to address a particular set of issues. This Reference Group is a collection of people who are subject matter experts to address a particular set of issues. Given the focus of this programme, the Reference Groups envisaged are <HR, FOI/GIPA and Security.>

Responsibilities include:

- Providing specialist discipline input
- Quality assurance during implementation.